

Internationales Institut
Liberale Politik Wien



Sozialwissenschaftliche
Schriftenreihe

Internationales Institut
Liberale Politik Wien

Gustav C. Gressel, Eugene Kogan

Missile Defence in Europe

Systems, Policies and Strategic Choices

Sozialwissenschaftliche Schriftenreihe
Reihe Studien

Wien, März 2010

Board internationaler Konsulenten

Prof. Dr. Hüseyin Bağcı, Middle East Technical University, Ankara

Prof. Dr. Lothar Höbelt, Universität Wien

Dr. Gottlieb F. Hoepli, Chefredaktor, St. Gallen

Univ.-Prof. Dr. Heimo Hofmeister, Universität Heidelberg

Prof. Dr. Bo Huldt, National Defence College Försvarshögskolan (HS), Schweden

Dir. Andreas Kirschhofer-Bozenhardt, Linz

Prof. Dr. Stefan Pickl, Universität der Bundeswehr München

Prof. Dr. Peter Schmidt, Stiftung Wissenschaft und Politik Berlin, Universität Mannheim und
Universität Heidelberg

Dr. Urs Schöttli, Korrespondent, Tokio - Hongkong

Prof. Dr. Peter W. Schulze, Universität Göttingen

Prof. Dr. Andrei V. Zagorski, MGIMO, Moskauer staatliches Institut für internationale
Beziehungen

Impressum

Eigentümer und Verleger: Internationales Institut für Liberale Politik Wien

Herausgeber und für den Inhalt verantwortlich: Sektionschef i.R. Hon.-Prof. DDr. Erich Reiter

Alle: A-1030 Wien, Custozzagasse 8/2

Wien, März 2010

Gesamtherstellung: IILP

ISBN 978-3-902595-40-9

Gefördert aus Mitteln der Republik Österreich
Bundesministerium für Wissenschaft und Forschung

Die Sozialwissenschaftliche Schriftenreihe wurde vom Institut für politische Grundlagenforschung 1983
gegründet und 1988 eingestellt.

Sie wird seit 2006 vom Internationalen Institut für Liberale Politik Wien weitergeführt.

SOZIALWISSENSCHAFTLICHE SCHRIFTENREIHE

Missile Defence in Europe Systems, Policies and Strategic Choices

Key Points	5
1.) The State of the Iranian Missiles and Nuclear Programme	6
2.) The U.S. Missile Defence Effort and U.S. Strategic Considerations	8
2.a.) The Pre-Bush History of the NMD	8
2.b.) The Problems with the ABM-Treaty	10
2.c.) President Bush and the Reinforcement of the U.S. Missile Defence Effort	10
2.d.) The “Iran-Problem” and the Missile Shield in Europe	12
2.e.) A 3 rd Site in Europe	14
3.) Missile Defence in Europe: GBI vs. SM-3	17
3.a.) The Ground Based Interceptors or Ground Based Midcourse Defence Segment	17
3.b.) The SM-3 System Family	19
4.) The Shift in Europe and Obama’s Strategic Considerations	21
4.a.) Can Europe be Defended with the New System?	22
4.b.) Unprofessional Decision or Strategic Choice?	24
5.) President Obama’s Missile Defence Initiative and Reactions from Russia and Turkey	26
5.a.) Russia	26
5.b.) Turkey’s Ambiguity	29
6.) Conclusion	30
Notes	32
Abbreviations and Acronyms	40
Bibliography	42
<hr/>	
Bisher erschienen	45



Mag. (FH) Mag. Gustav Carl Gressel

Born 1979 in Salzburg, he works since 2006 researcher in the Office for Security Policy at the Ministry of Defence in Vienna, Austria. His academic credits include a degree for Military Leadership from the Austrian Military Academy and for Political Sciences from the University of Salzburg.

His special interest of research include the questions of proliferation (nuclear and WMD), the Greater Middle East and the Far East.

Dr. Eugene Kogan holds a BA and MA in History from Tel Aviv University. In 1990 he received his PhD in History from Warwick University in the United Kingdom. His thesis examined the evacuation of Soviet military industries from the war zone in 1941-42.

Dr. Kogan is a noted expert in the field of defence technologies. He has held a series of research fellowships at some of Europe's most renowned research institutes, including Deutsche Gesellschaft fuer Auswaertige Politik, Stiftung Wissenschaft und Politik, the Swedish Defence Research Agency, the Swedish National Defence College, and the Institute of History of the Russian Academy of Sciences. In addition to all of this he has also conducted research at Harvard University. Recently he was attached as Guest Researcher to the Center for Pacific Asia Studies (CPAS) at Stockholm University and to the Department of International Relations at Middle East Technical University (METU).

Dr. Kogan is a prolific writer and has presented an extensive series of papers on the following topics:

- Conversion and related problems in the Soviet/Russian military industrial complex;
- Russian arms exports;
- The privatisation process in Russian industry, including within the military-industrial complex;
- Defence industrial policy in Central and Eastern Europe;
- Arms export policy;
- Israeli defence industrial policy and arms export strategy;
- Space technology;
- Chinese aviation industry.

Dr. Kogan currently is attached as a Guest Researcher to the International Institute for Liberal Policy (IILP).

Missile Defence in Europe: Systems, Policies and Strategic Choices

Key Points

- It can be stated that although Iran does not currently have a nuclear weapons capability, it is certainly striving to attain one. US intelligence analysts claimed that Iran halted its nuclear weapons programme as far back as 2003, and had not restarted its programme as of mid-2007. Their British counterparts said that the programme was restarted between 2004 and 2005. There is no consensus on whether the programme was halted or restarted. Despite UN efforts and further sanctions Iran remains undeterred from its goal of obtaining sufficient enriched uranium to produce a bomb. The government of Iran remains defiant in the face of Western pressure and is highly motivated to pursue its goal tenaciously. At every opportunity the government of Iran explicitly states that it is unwilling to stop development of its nuclear technology. No less important, work is also proceeding apace on the third main ingredient: a range of missile systems to serve as delivery vehicles. Although we may speculate on the date when Iran will possess its first nuclear bomb, so far such speculations have proved to be way off the mark. The same problem of speculation applies to the development of long-range, or inter-continental ballistic missile systems, and the ambitions of the Iranian government to have missiles at their disposal. The result, however, is the same: we do not know when Iran will get missile systems at hand.
- There has been a discussion and technical research on Missile Defence during the 1990s, based on the wartime-experiences in the Gulf. The struggle about the North Korean nuclear and missile programme led the Clinton administration to step up efforts in this matter. Missile defence evolved from theatre defence against tactical missiles towards the deployment of defensive strategic weapons systems. Their aim was to open more options for the United States' foreign and security policy than either pre-emptive military strikes or retaliatory deterrence when confronted with an emerging, aggressive and incalculable nuclear-armed state. The Bush-administration continued this policy, just accelerated the development and deployment of the respective systems. Abandoning the 1972 ABM-Treaty was a consequence of the 1999 Missile Defence Act, and – at the time – did not meet Russian opposition.
- Concerning Iran, the U.S. got into a strategic deadlock. Tehran's foreign-policy agenda made a confrontation with the United States possible if not likely in the future. A possible nuclear capacity would change the strategic situation in the Gulf. Given Iran's influence in Iraq as well as in Afghanistan, an American pre-emptive military strike to dismantle the nuclear programme is very unlikely. On the other hand, by organizing clandestine operations, sponsoring insurgent movements and being ambiguous about the usage of Iran's strategic weapons, Tehran could create a lot of "grey" crisis-situations, in which the threat of a possible nuclear retaliation by the U.S. won't be credible; a conventional military encounter on the other hand could be necessary. A credible missile defence architecture, which protects allies as well as the United States from the Iranian missile threat could facilitate the United States diplomacy and coalition building in such a situation.
- To protect the United States, the European, and the regional allies against Iranian missiles, the missile defence architecture had to be improved. The so called 3rd-Site, the planned installation of 10 two-staged ground-based interceptors in Poland as well as a fire-control-radar in the Czech Republic was well suited to defend Europe and the United States. The regional allies could have been protected by mobile SM-3 and THAAD-systems. Computer-simulations of several missile-defence scenarios, elaborated by the Austrian Armed Forces' Institute for Armament and Defence Technology (Amt für Rüstung und Wehrtechnik) have confirmed the American claims about the usefulness of the system. It is capable to defend Europe and the U.S. East Coast (the rest of the U.S. is covered by existing installations), but could not reach Russian ballistic missiles heading for the United States.
- While the Bush-deployment plan – if realized – would have provided a missile defence capacity to defend Europe and the United States, the Obama-plan is more questionable. The SM-3 Block I missile is not capable of

defending Europe. The missile's kinetic performance is too weak, as it is the THAAD or the Patriot. The yet to be developed SM-3 Block II will have a limited capacity to defend Europe, but only if the United States enjoys permanent naval presence in the Black Sea. Given the restrictions of the Montreux-Convention and Turkey's sceptical view on American naval presence in the Black Sea, there are many doubts about the feasibility of Obama's plans. One might only guess why Obama has abandoned a workable solution for a dubious deployment plan. One interpretation is that the immediate defence of the regional allies in the Middle East, especially Turkey is a higher priority than defending Europe and shifting financial assets from the 3rd Site to the development of shorter-ranged systems will make this easier. Considerations about the "multilateralization of the costs" by inviting NATO (a.k.a. Europe) to invest into its own defence might have played a role too.

- Moscow's reaction to President Barack Obama's recent revised missile defence plan can be summed up as cautious, apprehensive and suspicious. Moscow does not believe that its counterpart in Washington has changed the basic architecture of its missile defence system. Therefore, Moscow pursues a policy of stalling acceptance of the missile defence plan by asking for explanations, clarifications and time to study the plans. Whether Moscow can technologically match the US's military achievement with regard to missile defence remains questionable. It appears that Moscow has neither the wherewithal nor the necessary financial resources to pursue such an undertaking. A possible positioning of a

missile defence system on the sea-based Aegis warships in the Baltic Sea would not be accepted by Moscow since Moscow considers the Baltic Sea to be a maritime border of Russia and perceives such an act to be unfriendly, to say the least. That Russia and America co-operate on missile defence is wishful thinking, detached from real life, because the interests of both countries strongly diverge on the issue of missile defence. However, Russian officials would strongly disagree with the author on this point.

- On the other hand, Ankara's reaction towards President Obama's newly formulated missile defence remains very ambiguous. Ankara is torn between its commitment to the NATO Alliance that in the last several years has wavered and its robust economic, political and diplomatic relations to and with Iran. Although Turkey remains apprehensive about Iran's nuclear programme, it pursues a steady and consistent policy of peaceful co-existence and negotiations with Iran. In addition, as long as the current Turkish government remains at the helm, we may not see changes in Turkish-Iranian relations. The US pressure on Turkey to join missile defence network that is designed mainly to contain Iran or to counter Iranian missiles may prove to be counter-productive because of Turkey's interests in Iran. US pressure may also strain the recently improved relations between Turkey and the United States. As a result, there is no clear-cut strategic choice that Turkey is likely to make in the short- and/or medium-term. Thus, Turkey faces a serious or perhaps daunting challenge and, as a result, it will try to delay the ultimate decision as long as it can.

1.) The State of the Iranian Missiles and Nuclear Programme

It can be stated clearly that the Iranian nuclear issue has been the most dominant issue since about early 2000 and remains so even today. The number of articles, reports and books on the issue is certainly large. In addition, various assessments have noted that by 2008, or 2009 at the latest, Iran will have enough enriched uranium to produce one or two bombs. Then, in November 2007 a controversial report, National Intelligence Estimate (NIE), was published, prepared by the Washington-based National Intelligence Council (NIC). It claimed that 'In fall 2003, Tehran halted its nuclear weapons programme.' The NIE report clearly stated that:

'We also assess with moderate-to-high confidence that Tehran at a minimum is keeping open the option to develop nuclear weapons. We assess with moderate confidence that Tehran had not restarted its nuclear weapons programme as of mid-2007,

but we do not know whether it currently intends to develop nuclear weapons. We continue to assess with moderate-to-high confidence that Iran does not currently have a nuclear weapon. We assess with high confidence that Iran has the scientific, technical and industrial capacity eventually to produce nuclear weapons if it decides to do so.'

'We assess with moderate confidence that convincing the Iranian leadership to forgo the eventual development of nuclear weapons will be difficult given the linkage many within the leadership probably see between nuclear weapons development and Iran's key national security and foreign policy objectives, and given Iran's considerable effort at least between the late 1980s and 2003 to develop such weapons. In our judgement, only an Iranian political

decision to abandon a nuclear weapons objective would plausibly keep Iran from eventually producing nuclear weapons – and such a decision is inherently reversible.²

Following publication of the report Anthony Cordesman of the Washington-based Center for Strategic and International Studies provided a lucid analysis of the NIE. He noted that the NIE provided the first solid indication that the US intelligence community had the equivalent of a 'smoking gun' to confirm that Iran had an active nuclear weapons programme. It states that Iran's enrichment programmes allow it to move forward towards a nuclear weapon effort in spite of any continuing suspension of a formal nuclear weapons programme, and it raises serious doubts as to whether Iran's longer-term efforts to acquire nuclear weapons are negotiable. It does not in any way indicate that the United Nations' (UN) effort to prevent further Iranian weapons development is unnecessary or that further sanctions are not needed to limit or halt Iran's efforts.³ What is evident, however, is that neither the UN effort nor further sanctions have diverted Iran from its goal of obtaining enough enriched uranium to produce a bomb. Rather, they have motivated the government of Iran to pursue its goal tenaciously.⁴ No less important, work is also proceeding apace on the third main ingredient: a range of missile systems to serve as delivery vehicles.⁵ The issue of missile systems is discussed below.

Massachusetts Institute of Technology (MIT)-based nuclear non-proliferation expert Jim Walsh is among those who argue that 'there is overwhelming evidence that the policy of negotiations with, and imposing sanctions and export control measures against, Iran is not working. Moreover, the policy is unlikely to work within a timeframe that is relevant to the nuclear issue'. He and former US Ambassadors William Luers and Thomas Pickering contend that the 'strategy of containment and sanctions while irritating the Iranian regime, will prove irrelevant to the country's nuclear programmes', and that 'every centrifuge that Iran builds – whether it works or not – creates new facts on the ground'. [Thousands of centrifuges act in 'cascades' to concentrate the uranium.] In 2007, Iran rapidly expanded its centrifuge programme, going from around 250 machines in November 2006 to about 3000 a year later.⁶ In 2008, it rapidly improved the operation of the centrifuge cascades, moving from 20% to 85% of claimed capacity (based on the uranium hexafluoride (UF₆) feed rate). By 7 November 2008, Iran had produced 630 kg of low-enriched uranium (LEU), and was adding more than 2 kg a day to this total. Under optimal conditions, around 700 kg to 800 kg of LEU is needed to make the approximately 20 kg of 93% highly enriched

uranium (HEU) required for a nuclear weapon.⁷ Despite these facts, Iran's progress with advance centrifuges is difficult to predict. The fact that it is continuing to add cascades of exclusively P-1 centrifuges suggests that it is experiencing problems with the new-generation machines. On the other hand, given the improved operational efficiency of the P-1 cascades in 2008, it would not be surprising if the US intelligence community again brought forward its worst-case scenario named in the NIE, namely that late 2009 is the earliest possible date Iran could produce enough HEU for a nuclear weapon.⁸ As its September 2008 rate of production indicate, Iran could produce enough LEU for approximately one weapon a year, once re-enriched to HEU. This timescale could contract if Iran added significantly more centrifuges. On the other hand, Iran might also experience technical problems that would set back production.⁹

Since NIE was issued, new evidence of weapons development efforts beyond initial 'laptop' and 'Green Salt' disclosures has surfaced. Iran has also been discovered to have completed development of a new, far more advanced, centrifuge. Iran has announced two new long-range ballistic missiles (LRBM), and a 'space' programme that can be adapted to missile development.¹⁰ In other words, we can observe the government of Iran's concerted effort to prepare the ground for producing and testing a bomb.

Although Iran does not currently have a nuclear weapons capability (as of 1 June 2009), Iran's gas centrifuge programme is currently sufficiently large to provide Iran with several methods of producing weapon-grade uranium (WGU). The time needed to produce enough WGU for a nuclear weapon is measured in months or a few years at most.¹¹ Although the forecast of December 2008, given as the date by which Iran is likely to have stockpiled U-235 fuel for a first bomb, is long passed, and the forecast of October 2009¹² for a second bomb is also passé, it does not mean that Iran is incapable of stockpiling enough U-235 for the nuclear device. It only underlines the fact that Iran has not yet reached enough capacity of WGU.

A nuclear weapon programme requires not only the production of fissile material and its weaponisation, but also an effective and credible delivery system with good range, accuracy and survivability (see note 5). Alongside the NIE judgement that Iran was pursuing a nuclear weaponisation programme prior to 2003, this suggests a possible Iranian strategy of currently focusing its energies on

developing the essential but ambiguous dual-use capabilities for the delivery of nuclear weapons whilst international attention is trained upon weapons themselves. However, Iranian mastery of long-range missile technology still looks some way off¹³, but what is important to emphasise and not to underestimate is that Iran has been and still is making steady progress in long-range missile technology.

It should be remembered that Iranian official media reports on the various missile tests tend to slightly exaggerate the scope of development, the successful launch of missiles, and finally, the capability of the missiles. Nonetheless, it should be remembered that over the last decade, Iran has made modest, steady, and gradual advances in its rocket and missile development, through international co-operation, purchases and indigenous development.¹⁴ To mention several recent developments: in December 2007, western intelligence sources revealed that Iran was apparently trying to develop a two-stage solid propellant medium-range ballistic missile (MRBM) with an estimated range of between 2000 and 2500 km. Following the March 2007 launch of a suborbital research rocket, on 4 February 2008 Iran announced that it had successfully launched its Kavoshgar 1 (Explorer 1) research rocket. On 9 July 2008 Iran conducted the 'Great Prophet' military exercise.

During the exercise, nine medium- and short-range ballistic missiles (SRBM) were fired from the Iranian desert. While the latest tests do not reveal any new capability beyond what has already been seen, they do signal Iran's continuing determination to advance and demonstrate its missile capability.¹⁵ In addition, as Uzi Rubin noted in an interview with *Iran Watch*, 'the Iranians achieved good progress in missile system engineering and good programme management. Not the technology. You can acquire technology.'¹⁶ However, in a recent report online the same Uzi Rubin wrote something very different, namely that the solid propellant Sajjil was a *technological and strategic breakthrough* (author's italics). It already has sufficient range to threaten a number of European Union (EU) states.¹⁷ It means that over the last two months Iran's missile programme or rather its technological component has undergone a substantial change.

As in the case of nuclear technology development presented above, the missile programme remains the top priority of the government of Iran. However, as in the case of the development of nuclear technology, judging the development of the missile technology progress is also very difficult. In other words, speculation and guessing remains the only 'games in town'.

2.) The U.S. Missile Defence Effort and U.S. Strategic Considerations

Political communication is aimed at influencing the behaviour of others – the own public, foreign decision makers, etc. –, to persuade, or to manipulate. It is not – or to a much lesser extent – informative and never analytically correct.¹⁸ Therefore, the analyst cannot stay within the framework of official communications and statements, but has to extract the essence from these communication and actions of the governments involved and try to assemble them into a puzzle of probable strategic considerations, options, and aims.¹⁹ A lot of guessing and speculation is involved in this kind of business. The more obscure and politically sensitive the topic, the less good open sources available, the more speculative an analysis will be. Of course, the following passages will contain several thoughts on interests, objectives and perceived strategies that could be qualified as speculation. Otherwise it would not be possible to write anything else but a simple repetition of governmental statements. Only time will show, how accurate these hypotheses are and how close the estimations came to actual considerations of the decision-makers.

2.a.) The Pre-Bush History of the NMD

The announcement that the United States of America, at the time led by President George W. Bush, are planning to deploy components of their then National Missile Defence Shield in Poland and the Czech Republic caused considerable amount of confusion and sometimes harsh opposition from their European NATO allies.²⁰ The then Discussion was indeed confusing and rather resembling the 1980s missile debate on the deployment of American IRBM in Europe than on missile defence. European reactions were focussed on Russia's harsh reactions and strict opposition towards the so-called 3rd Site in Europe. The deployment, they concluded (following the Kremlin's course of argumentation) must have been a kind of provocation towards Moscow, or some other Bush policy to divide Europe.²¹

But NMD (national missile defence) was neither Bush's invention, nor was it turned against Russia. Indeed, since the ceasing of Regan's SDI (Strategic Defence Initiative), technical research – at least evaluating the technical possibilities –

on missile defence never stopped. Although the US had disassembled their single strategic ABM-site, which was allowed under the ABM Treaty, they never ceased the missile defence effort for sure. But first, the magnitude of Soviet strategic missiles, and later the general detente and the lack of a larger missile-capable rival never gave the necessity for the US to re-start a major effort in missile defence in terms of the deployment of an operational system.

The second Gulf War in 1990-91 proved the vulnerability of Western forces to tactical ballistic missiles (TBM) like the Soviet SCUD and her various reengineered and modified variants circulating in the 3rd world. The Patriot Surface to Air Missile (SAM), used to protect Allied forces as well as Israeli towns from Iraqi SCUDs during that war, performed poorly against the Iraqi missiles. Indeed, more missiles broke apart during flight due to their instability, improper design and assembly than were destroyed by the Patriot.²² But it showed the necessity, to both the US as well as their NATO-Allies, that a defensive Weapon against TBMs was needed.²³ The numbers of TBM-owning countries was high in the early 90s, and it promised to grow further, making TBMs a “normal” battlefield feature in any given conflict. The US, France, the UK, Italy, Germany, Israel and the Soviet Union started to develop Missiles that were intended to intercept TBMs. But due to sharp cuts in defence-budgets and R&D investments, only the American Patriot PAC-3, the Israeli Arrow (in various variants), and much later the Russian S-400 ever were manufactured. The German TLVS, later changed to MEADS and supported by US funds, never left the sketch board. The French-British-Italian ASTER Missile was protracted; finally it saw action only as seaborne ASTER-15 and much later as more capable ASTER 30 SAM. Enlarged and more sophisticated BMD Versions for TMD, and especially ground-mobile systems to protect troops and cities were cancelled. In other words, all the “NATO Missile Defence” integration debates, which were held after Bush’s announcement for fielding the 3rd Site were about castles in the sky. Nobody within NATO, except for the United States ever gave a real commitment to missile defence, even if it was in the small tactical perimeter, which NATO has agreed on since 1991.

Later for the United States, the necessity to step up missile defence beyond the tactical perimeter arose. Not to George W. Bush and not because of Russia, but to Bill Clinton, facing an ever more provocative and daring North Korea.²⁴ On 31st August 1998 North Korea launched a “Space booster”, without any previous warning or information about the missile, its purpose and payload.²⁵ Of course, the preparation and

assembly of a three-stage ballistic missile in North Korea’s Musudan-ri launch centre was discovered and observed via satellite-reconnaissance. But nobody could guess where the missile would head to and what payload it would carry. If the missile broke apart over Japanese territory, what kind of impact was to be expected there? Would a North Korean nuclear test-warhead be save enough not to explode at premature impact?

The situation was very uncomfortable for the Clinton administration, especially because there were little options for doing something about it. China would have never accepted a pre-emptive military strike that close to her border, neither a general war against North Korea. And a general confrontation, if not war, with China was the last thing, Clinton was looking for. Deterrence was a weak argument too. If North Korea would have done the unthinkable – hitting Japan with a nuclear device –, Clinton would still have to explain to his electorate and to Beijing, why the US would retaliate with nuclear weapons to an attack that did not hit the US itself. Again, a serious confrontation, if not all-out war with China would have been on the horizon. If Clinton then would have agreed to anything shorter than nuclear retaliation, a war with China could have been avoided, but the credibility of the US nuclear deterrence and alliance-policy would have been ruined. Clinton was lucky that the scrap, Pyongyang sent skywards, did not contain any nuclear material and the derbies of the failed missile, that disintegrated during its flight crashed into the pacific ocean some 1,400 miles off the Japanese coast.

But Clinton recognized that he needed a military tool to cope with such situations, which was something in-between pre-emptive strikes and nuclear deterrence. Time for negotiations should be gained; allies should be kept confident while other states like China and Russia should not be confronted head-on. Missile defence offered these tools. First, missile-defence installations are visible to the enemies of the US, thereby functioning as a deterrent too. Second, they do not prejudice any further actions against the aggressor after he has launched the missile. The US administration then would have some time to rally the international society against North Korea after it had revealed itself as an aggressor to the world. The reaction could be tailored to the extent, that the US electorate and the great powers could agree, without jeopardizing US credibility, alliances or nuclear deterrence-policy.²⁶

Theses lessons drawn from the 1998 situation in North Korea played a key role in all of the following American considerations about missile defence. Priorities, countries, regions and

presidents changed over time, but the basic requirement to provide an additional tool in the US policy toward rouge-states, especially in situations where direct military action is not feasible or preferable, always stayed the same. Unfortunately in Europe, where world politics seems to end at the Urals, these lessons were never taken, and never understood.

2.b.) The Problems with the ABM-Treaty

To counter the North Korean missiles, systems far more capable than the previously developed Patriot PAC-3 were needed. Missiles like the Patriot PAC-3 were built to intercept short-range ballistic missiles (SRBM) like the SCUD or her upscaled copies built in Iran, Iraq and North Korea. These SRBM had a maximum range of 300 to 600km, relatively short flight-time (300-500 seconds for the SCUD and her derivatives), a relatively low apogee (beneath 200km),²⁷ and the integral missile (the warhead does not separate from the missile after engine-burn-out) is relatively large target, easy to designate by radar.²⁸ The larger North Korean Nodong A missile, which saw use in Pakistan and Iran too, had a range of 1,300km, and an apogee of about 400km (at 40° angle). With this missile, the warhead separates before re-entering the atmosphere, enhancing range and reducing radar-cross-sections.²⁹ Furthermore, the two- to three stage missiles under development in North Korea demanded an interceptor missile capable of intercepting a full grown ICBM, which – except for multiple re-entry vehicles and sophisticated countermeasures – shared many characteristics with early Chinese or Russian strategic missiles.

When the Clinton administration created the missile defence act in 1999³⁰ – a consequence of North Korea's behaviour – it was already obvious that the new emerging missile threat from 3rd world countries with unpredictable leaders such as North Korea could not have been encountered within the limits of the 1972 ABM-Treaty. But Clinton also knew of the Russian resistance towards an end of the ABM-Treaty. As the American-Russian relations were at their lowest point since 1989 due to NATO's military actions against Serbia over the Kosovo, Clinton was reluctant to move away the ABM obstacle. So the Missile Defence Act in 1999 authorized the deployment of weapons, which when deployed would certainly result in the abolishment of the ABM Treaty, but the treaty itself was kept intact. As North Korean multi-staged missiles proved prone to technical failures and North Korea went back to the negotiating table, it seemed that the US would have some time to develop the interceptors as well as engaging on the ABM-issue. There was no reason to hesitate, and the ambiguous situation was prolonged.

But why was the ABM Treaty an obstacle towards the missile defence system?³¹ Russia had maintained a limited ABM-system well within the limits of the ABM-Treaty! Most important, the ABM Treaty limited the ABM sites to one small location, either to protect an ICBM launching site, or the capital of the respective country. This limitation would have made little sense in case of the North Korean missile threat, because the protection of the US allies in East Asia, the forward US-bases in the Region, Hawaii and the US West Coast were far more important than the protection of an US-ICBM launching site or Washington DC. Area-protection, such as needed against a random missile threat from rouge states, was explicitly forbidden under the ABM Treaty.

Then, the ABM Treaty prohibited any incorporation of allies into the missile defence shield. In 1972 this was meant to keep the military balance in Europe untouched. But at the eve of the 20th century, this prohibition was pointless. The incorporation of Japan and South Korea was vital to deter North Korea from using ballistic missiles as a viable blackmailing tool against the US. Some years later, confronting an Iranian missile threat, the same was true for Europe and US allies in the Middle East.

Last but not least, the ABM treaty forbade any seaborne deployment of interceptors. Given the East Asian theatre, this was a special obstacle to any missile defence shield in East Asia. Japan is an island-chain with little depth towards the east. Any forward deployed missile defence would have to be a floating device. The same is true for Guam and Hawaii. Furthermore, in terms of crisis, seaborne assets may quickly reinforce or supplement the coastal installations, also serving as a visible signal of determination towards the rouge state. Seaborne elements were vital for a functioning missile defence in East Asia, so sooner or later, the ABM treaty had to be modified or dropped as such. It was only a matter of time, when the U.S. would re-evaluate the missile threat and give missile defence a higher priority.

2.c.) President Bush and the Reinforcement of the U.S. Missile Defence Effort

When President Bush came to Power in Spring 2001, the missile defence funding rose from 5bn USD in the FY 2001 to 7bn USD in FY 2002.³² Stepping up the missile defence efforts was part of Bush's electoral campaign. Then, prior to the 9/11 attacks it seemed to be a valid tool to prevent a deepened U.S. involvement into various crisis – something Bush initially wanted to avoid – by restricting U.S. involvement to deterrence and securing her stable allies.

After 9/11, especially in December 2001, when Bush formally withdrew from the ABM treaty,³³ the strategic situation and calculations had to be adjusted again. Then it was certain that the US would be involved in Central Asia and the Middle East for the foreseeable future.³⁴ And it was sure, that their commitment to the war against terror consumed the assets that would be needed for any broader action in East Asia. On the East Asian theatre, the U.S. had to rely on deterrence based on assets they could afford to strip from the Middle-Eastern theatre: naval and airborne assets, supplemented by missile defence. In case any of the U.S.'s opponents in East Asia would use the opportunity to change the status quo, the U.S. would simply reinforce the forces of their local allies by these assets.

Therefore, the missile defence architecture that came into being in 2002 had a clear focus on East Asia.³⁵ In South Korea and Japan, Patriot PAC-3 missiles were to be deployed and later reinforced by the more capable Theatre High Altitude Air Defence System THAAD to defend those countries against short-range ballistic missiles. Seaborne SM-3 interceptors were to be deployed around the waters of these states to supplement or reinforce the effort as well as surrounding US-bases in the Western-Pacific if threatened.

To defend the U.S. West coast, ground-based Interceptors (GBI) were to be deployed in Fort Greely, Alaska and Vandenberg Air Force Base, California. At the time of writing (2009), 26 GBI were based in Alaska, four in California.³⁶ These three-staged missiles were the only systems capable of intercepting intercontinental ballistic missiles, medium- or intermediate-range ballistic missiles with a range greater than 1.500km. The GBI reached an operational status in a relatively short period of time, because the three boosters were derived from commercial satellite-launching systems.³⁷ The kill-vehicle was designed and devolved on the experiences of the research done in the 90s and early 2000. So the GBI was scheduled for operational deployment in 2006.³⁸ Later, they might have been supplemented by mobile "Kinetic Energy Interceptors",³⁹ new designed midcourse-defence missiles with enhanced capabilities, especially fielding a multiple-kill vehicle, a platform that would allow one intercepting missile to engage multiple targets. This project was finally cancelled in 2009 for financial reasons.

Just as important as the missiles are the sensors connected to the mentioned missile-systems. Sensors have to detect, identify, and track the approaching missiles or warheads, then providing the data for situation awareness as well as missile guidance. One of the most important assets are early-warning satellites.

Under the "Space Tracking and Surveillance System" programme, two layers of satellites are intended to provide early-warning, target acquisition, and missile tracking duties as well as constant data-link for the interceptors. High-orbital (SBRIS-high) surveillance satellites detect the missile-launch, while low-orbital satellites (SBRIS-low) track the missile and provide the data-link for the intercepting missile. The space-based early-warning and tracking capability is of critical importance for missile defence. Without these satellites, the time needed to determine the course of the missile, initiate pre-start-sequence and finally intercept the incoming missile would be very short or too short in several scenarios.⁴⁰ But due to financial problems and delays in developing the satellites, the orbital component of the missile defence shield are not operational yet. In 2009, the first two research- and development satellites were launched into orbit.⁴¹ The experimental satellites will test key technologies that will be incorporated in the operational satellites to be deployed later on. One can only guess, how long this will take, but given the technologic complexity of the system and the costs for the multiple satellites it would be a surprise if the SBRIS system would be fully operational earlier than by 2020. It is worth noticing that any nation-wide missile defence system would have only very limited operational capabilities without the orbital surveillance and tracking segment – regardless the missile chosen for interception!

On the ground, three cold-war era long range surveillance radars will be modified to be incorporated into the missile defence architecture. They are based in Beale (California), Fylingdales (United Kingdom), and Thule (Greenland).⁴² A sea-based X-band Radar can be deployed around the continent to supplement the sensors.⁴³ Originally this radar was scheduled for deployment at an anchorage at the Aleutian Islands chain to detect and track incoming North Korean missiles. Meanwhile, it is used to support the Missile Defence Agency's test-programme, but can be deployed for operational purposes if the need arises.

Air-mobile, forward deployed AN/TPY-2 radars will further supplement these sensors.⁴⁴ At the time (2009) two of these radars are deployed, one in Japan and one in Israel.

In 2004 not only the missiles, also the sensors were looking westward. In terms of defending the U.S. against North-Korean missiles, the Alaska-based installations (GBIs in Fort Greely and X-band Radar at the Aleuts) were most important, because the missiles would have to travel alongside the Aleuts and the Alaskan West Coast if targeting larger cities in the West (especially in California with the large naval installations as well as economic and strategic

targets) or across the polar area bypassing the Aleuts slightly northwards for hitting targets on the East-Coast.

The concentration of U.S. missile defence assets towards the Pacific was understandable from the late 90s perspective on the proliferation threat. However it had a considerable weakness: if a regional power in any region beyond East-Asia, especially the Middle East would acquire weapons of mass destruction (WMD) and ballistic missiles (BM) that could reach the United States, forward deployed U.S. bases or allies in Europe, or the Middle East, it would be of little help. Computer-simulations show that the Alaska- as well as the California-based missiles were too far away to intercept a DF-5-like missile⁴⁵ launched from the Middle East, heading for Washington D.C., Miami, or other cities on the Eastern Coast.

However, concerning the Middle East, the Bush-administration had other plans to deal with missile-proliferation.⁴⁶ In March 2003, Iraq was invaded and subsequently the regime of Saddam Hussein was overthrown by a U.S. led coalition. Saddam Hussein had a long record of developing and using short- to (assumed) medium-range ballistic missiles and at least part of the war rationale was to strip Iraq of WMD and delivery vehicles. Furthermore, it was argued, that the regime change in Iraq would serve as an example to other states in the region not to provoke the United States and to push for ambitious WMD programmes. To summarize the thought of the time: “Arguably, a successful outcome in Iraq – whether real disarmament under UN inspections or replacement of Saddam with a government prepared to comply with Iraq’s treaty commitments – might help tip the balance in favour of those in Tehran arguing for restraint. In principle, elimination of the Iraqi WMD threat could reduce one of the key Iranian motivations for acquiring WMD and set an example for avoiding actions that would make Iran a target of international pressure.”⁴⁷ Now, more than six years later, these arguments may sound unfounded, and the WMD-debate is known as little more than a wrong pretext to unleash a war that was planned and desired much earlier.

But at the time the decision of the Bush-administration was taken, the “counter-WMD-deterrence” argument was not completely off reason.⁴⁸ China and Russia, the U.S. antagonists that possessed enough nuclear weapons to deter the United States from intervention, were far away and by the time had no ability to deploy meaningful military assets toward the region to prevent the U.S. from acting militarily – regardless against whom. One has to notice, that in 2002-2003 Washington greatly overestimated

its military might – or at least the universality of its military might as a political tool. In their mind, a successful regime-change in Iraq might trigger a wave of reforms in the region, but at least would deter other nations from confronting U.S. interests in the region⁴⁹ – especially concerning WMD. If events would have worked out as planned, the US would have pulled out of a democratic Iraq in a few years, ready to pick up the next foe. Libya for example, did cease her WMD-research programmes and ceased to reach for medium-range ballistic missiles in the cause of the 2003-events. However, history took another course.

As soon as 2005, the United States found themselves involved in an intensifying struggle against an increasingly destabilizing insurgency movement in Iraq.⁵⁰ The US had failed to create a stable, democratic political system, and a working post-war economy; not even physical security for Iraq’s citizens as well as coalition forces could be achieved. And, while no WMD and long-range delivery vehicles were found in Iraq, an increasingly assertive Iran was pushing for Uranium-enrichment and long-range missile programmes. The military intervention in Iraq rather fostered Iran’s determination to develop nuclear weapons than deterring Tehran from doing so.

2.d.) The “Iran-Problem” and the Missile Shield in Europe

Concerning Iran, the U.S. soon faced a similar dilemma as with North Korea. To recapitulate, North Korea was destabilising the region by ambitious programmes on nuclear weapons as well as long-range missiles, connected to its unpredictable behaviour. The geographical proximity and the strong Chinese interest made any preventive military action unfeasible, while the U.S. was reluctant to commit herself to any retaliatory strategy. In this situation, the U.S. had to outweigh a possible loss of credibility of either her nuclear deterrence policy or her role as a regional security provider.

As shown in Chapter 1, Iran is pushing both for nuclear weapons as well as long-range missiles.⁵¹ To make it even more complicated, Iran was pursuing regional hegemonial goals that were quite likely to bring her on a collision course with the United States.⁵² As soon as the Shiite insurgency appeared in Iraq, speculations on Iran’s role, funding, training and even directing the insurgency came up.⁵³ The arrest of Iranian citizens in Iraq, suspected trainers for insurgent-groups, and the appearance of Iranian weapons and munitions in the hands off Shiite insurgents⁵⁴ underlined the impression that Tehran wanted to pin down its main foreign opponent – the U.S. – in a proxy-war in Iraq.⁵⁵ During the 80s and 90s, Iran had sponsored

Shiite insurgency against Saddam Hussein, and the military actions of the then regime in Iraq drove many Iraqi Shiites – familiar with the situation on the ground, the terrain and the basic social structures – to Iran. It was not that difficult for Tehran, to have an edge in the inner-Iraqi struggle for power.⁵⁶

Likewise, the future of Iraq after an American withdrawal seems to be very uncertain. Close societal and economic ties between Iran and Iraq suggest that – with or without insurgency –, Iraq will depend on its eastern neighbour for quite a while. And while the U.S. tried to engage Iran on the topic of Iraq's stability,⁵⁷ the impression was left in Washington that Tehran was well aware that time was on their side.

On 12th of July 2006 the Lebanese terrorist group Hezb'Allah captured two Israeli soldiers in northern Israel, abducting them to Lebanon.⁵⁸ The subsequent war between Israel and the Hizb'Allah revealed not only that Hezb'Allah was stronger than previously estimated by Israeli and western intelligence, but also that Iranian supplied weaponry – like the Chinese C-802 anti-surface-force-missile that hit the Israeli corvette INS Hanit on July 14th 2006⁵⁹ – and training by the Iranian Revolutionary Guards played a significant role in that strength. Whether Iran has encouraged Hezb'Allah to escalate or not – in the region, the war was an Iranian show of force, demonstrating Tehran's ability to destabilize the region at wish.⁶⁰

The lukewarm stand of other Arab nations towards Hezb'Allah showed their concern over increasingly self-assured Shiite behaviour in the Middle East.⁶¹ Iran certainly was the centre of gravity of this self-assurance, fostering political as well as clandestine military contacts to Shiite groups throughout the region, alerting the traditional Sunnite elites. Beside Lebanon, Kuwait, Saudi-Arabia, Oman, Yemen, Pakistan and Afghanistan have sizable Shiite minorities. Within the Gulf-States, they are inhabiting the oil-rich eastern parts of these countries. Later in 2009, Iran was accused of supporting insurgency-groups in the Yemeni civil war,⁶² as well as Iranian special forces in clandestine training- and fighting⁶³ missions showed up in Western Afghanistan.

In other words, Iran has the potential and possibility to cause a lot of troubles in the Middle East, and given the American involvement in Afghanistan and Iraq, the US is hardly in a position to encounter all of these possible threats if they turn violent. Especially in Iraq and Afghanistan, where the US is struggling to achieve a more or less stable situation to enable them to withdraw from these increasingly unpopular theatres, an Iran-sponsored upspring or escalation could significantly disturb U.S.

foreign policy. Whatever said publicly, given the U.S. dependence on Iran in the Iraqi as well as the Afghan theatre, direct American military action against Iran is very unlikely. On the other hand, given the US support and close political as well as economic ties to the Gulf States and Israel, the likelihood for future U.S.-Iranian confrontation is high.

In the years following the invasion of Iraq-, the Bush-administration seemed to have realized, that concerning Iran the U.S. were in a similar situation like with North Korea in East Asia. Given Iran's ambitious foreign-policy agenda a confrontation with Iran is very likely. In the case of a regional crisis, the Gulf-States, as well as the American economic interests will demand for U.S. action. But due to the U.S. involvement in Iraq and Afghanistan, a pre-emptive solution of the "Iran-Problem" has to be ruled out. Given the nuclear ambitions and capable Iranian missile-programme, everything else but this pre-emptive military strike would be a delicate game alongside a slim line of a possible major escalation.

To make it clear, a direct, unprovoked nuclear attack of Iran on the United States or Israel would be self-destructive to Iran and has to be ruled out as a likely course of action. But what if – just as a hypothetical scenario – tensions between Shiite and Sunnite groups would lead to a civil war in one of the Gulf States. To deter the West from intervening, Iran mobilizes its missile forces, test firing an ICBM and warning any other party, that intervening would trigger in "severe retaliatory actions" from the Islamic Republic. How would this effect U.S. domestic support for intervention? How would this effect the effort rallying an international coalition for the intervention? How would the other Gulf-States react confronted with this kind of threat? What would happen if Iran was preparing a direct military involvement in such a conflict? Would the U.S. have to reassure their regional allies by explicitly granting these states a place in the nuclear umbrella of the United States? How would the U.S. public react on such a move, given the strained perceptions of these states after 9/11? And would the U.S. then predetermine a long-term military engagement in the region on terms of circumstances they hardly control?

Just like in East Asia, an operational missile-defence shield would take a lot of pressure from the U.S. The Gulf-States could be reassured against the Iranian missile threat by something else than nuclear deterrence or retaliation. Likewise, coalition building would be a lot easier, if the European allies could be protected from Iranian missiles. Despite the quarrels between some European states and the U.S. about the decision to go to war against

Saddam Hussein in 2003, in both wars 1990/91 and 2003 as well as in the Afghanistan-campaign the largest non-U.S. contingents to the international coalition were contributed by European NATO allies. And even if they would not join a possible

coalition, one can estimate that there will be fewer opposition towards military action, both domestic as well as from the international society, if there would be a credible, non-nuclear answer against Iranian missiles.

Non-Conventional Delivery Vehicles?

When debating the Iranian options against the West, there is a persistent view that missile defence would be a useless effort, given the variety of non-conventional delivery options for nuclear weapons. For Iran, so the perception, it would be much easier and cheaper to send a bomb on board of a yacht, a sports-plane, or in a rucksack to the United States. Given the difficulty to guard the green and blue borders of the United States and the undisturbed freedom of movement once reached the States, Iranian agents and nuclear suicide-bombers would have an easy game selecting and destroying any major city or other civilian or economic target. While these James-Bond-stories make good movie-scripts, there are various reasons why they are quite unrealistic scenarios, probably never to happen.

First, they badly miscalculate Iran's intentions if not the purpose of nuclear weapons at all. Just like any other nuclear power, Iran does not develop these weapons to immediately annihilate its enemies, especially not those equipped with about 1700 (U.S.A.) or 200 (Israel) operational nuclear warheads. A sneak nuclear attack is not the mind of Achmadinejad.

Instead, nuclear weapons boost foreign policy prestige of the nations possessing them, enhance their regional influence and give them additional weight in political decisions that could affect them. Additionally, their perceived military invulnerability provides them the opportunity to act more freely and proactive in foreign policy. And last but not least, for an internally disputed regime and fractioned state like Iran, the possession of nuclear weapons and prestige of a nuclear power provides a tool to internally rally the population and dissenting elite fractions around the new international status and the "responsibility" to maintain state and government in a functional manner.

If Iran would have to use nuclear weapons, this would mean a total failure of its politics toward the rest of the world. Their usage is not intended, but rather their possession and possible options have to be displayed and communicated to Iran's antagonists in an un-ambiguous, visible and very public way!

For this purpose, missiles serve much better than yachts and backpackers. In an emerging crisis, Iran can visibly raise the readiness of its missile forces, can test fire a missile at range of an important target etc. to underline its determinedness in this case. Equally, to show the nation's power and technological skills, missiles can be paraded and missile exercises and tests make their way into Western news.

But how to publicly display that some backpackers and a yacht made their way to the U.S. or Israel? Any news coverage of their potential would unveil their cover and compromise their mission. And what might and technological skill would be demonstrated to the international public, if some marching inter-rail students and a trailered yacht would be displayed on revolution's day?

The problem was, that beside Israel, which together with the United States developed the "Arrow" ABM-Interceptor since the 90s, no missile defence system existed in and for Europe as well as for the Gulf States. Concerning the Gulf-States, the situation was technically easier, but industrially more challenging. BMD-Systems that could defend them from Iranian short-range ballistic missiles (namely the Patriot-PAC3, the THAAD and the SM-3) were developed or under development. The U.S. would simply have to introduce a higher quantity of these systems into their armed forces. The Persian Gulf allows the deployment

of seaborne SM-3 Systems in optimal positions; additionally the ships may serve as mobile reinforcement to any area to be protected. But given the necessity to deploy these assets in East Asia as well as the Middle East, they would have to be produced in higher numbers than previously thought.

2.e.) A 3rd Site in Europe

To defend Europe or the United States from Iranian intermediate-range or intercontinental ballistic missiles is a far more challenging demand. As previously mentioned, the Alaska-

and California based installations do not cover the U.S. Eastern Coast when attacked by an Iranian launched ICBM. A 3rd site would have to be constructed, either at the northeastern part of the United States, on the very north of the United Kingdom or in Central-Eastern Europe. The system deployed there would have to be of the same capability as the systems deployed in the United States to deal with the emerging missile threat.

Two options were open for the Bush-Administration, a unilateral and a multilateral approach:

The multilateral approach would have meant to develop and deploy missile defence capacity within NATO, which could cope with the Iranian missile threat. Initially, the United States tried to move along the multilateral path, but without any success.⁶⁴ Anyway, having the American strategic interests as well as the planned scope of the system in mind, there were several good reasons not to proceed with the multilateral strategy:

- NATO's missile defence policy was restricted to intercept short-range ballistic missiles and protect deployed troops (strangely enough, the European public never questioned their government's judgement to withhold missile protection for the civilian population, but grant them to their soldiers). To develop interceptors that could deal with missiles beyond the 1000km range met heavy opposition, because this would be considered a strategic ABM system by Russia, and several European nations were cautious on confronting Russia over missile defence. Due to the lack of any NATO decision on systems beyond the anti-TBM-capacity, EXOGUARD, a possible European interceptor against IRBM, remained a conceptual study.
- Despite of various announcements and statements of European politicians on NATO summits since the 1990/91 Gulf War, that NATO would develop missile defence capabilities, not a single operational missile defence system was produced outside the U.S. from 1991 to 2006. While the U.S. had developed the Patriot PAC-3 and the SM-3, (the THAAD was under development), in Europe all developments of land-based systems were cancelled or delayed to the infinite. It is debatable whether the recently introduced naval PAAMS-System has a very limited point-defence ability against tactical ballistic missiles. However, land based and enlarged versions of this missile, which would have been capable of a missile defence role, were not developed.

Given this experience, it was – and still is – very doubtful whether European NATO members are committed to missile defence beyond lip service. If the U.S. had tried to press NATO towards a stronger commitment in missile defence in 2006 – as they did in 2001-2003 –, the outcome of this effort would have been questionable. With strong opposition in Germany and France at the time, a multilateral approach via NATO seemed to achieve little results.

- If a NATO missile defence system would have been set up in Europe, it would have been under NATO command, therefore being bound on a collective decision by the NATO-council in its operational status. Not only did the U.S. at the time maintain the only C² infrastructure in Europe connected to missile defence and contributed major research and development resources towards the topic, the U.S. had to fear that in case of a crisis in the Middle East, a NATO-bound missile defence shield would be used by the Europeans to bargain for political concessions. During the preparations of Iraqi-Freedom, Germany and France vetoed to deploy NATO-Patriot missiles in Turkey and Israel. Neither Turkey nor Israel took part in the operation itself, but for the two European countries it was a good opportunity to underline their general opposition towards the American cause. A future NATO-missile defence shield, which would be necessary to defend the U.S. homeland too, was an asset too valuable in any further military operation in the Gulf to let it be an object of inter-alliance black-mailing operations.

So the Bush-administration decided to engage several countries in Europe to accept the deployment of a purely American financed and controlled system in Europe. When this became public in November 2005, negotiations with the United Kingdom, Denmark, Hungary, Poland and the Czech Republic were ongoing.⁶⁵

The decision was understandable from the strategic point of view, however, without even informing the governments of the other NATO countries about their plans, the Bush administration contributed to the sceptical reaction on the old continent. The impression was left, that by bypassing NATO, the U.S. wanted to reinforce the division within Europe and ties to separate certain members of the alliance from the other. However, given the later U.S. attempts to rally Europe behind the missile defence in Europe (especially before the Bucharest-summit in 2008),⁶⁶ it is very unlikely that the U.S. tried to split the alliance intentionally.

The reaction and debate in Europe then was rather a resemblance of the 80s missile debate than a debate on missile defence. Arguments were rare during the debate; they rather reflected the discussants general feelings towards the Bush-administration or the United States. Sometimes the impression was left that all missiles were considered dangerous, just because they are missiles.⁶⁷

Left-wing parties, like the German Social Democrats (SPD), expressed their opposition from the start. Besides calling on popular sentiments, they claimed that the American deployment would lead towards a new arms race in Europe.⁶⁸ The Russian concerns however, was the main argument made by the critics of the system within “old Europe”, signalling to Moscow, that Russia not only could mobilize its old support-base of the political left, but also that Russia’s influence on European decision-making preferences grew with the determination and confronting challenge Russia posed to Europe. Beside repeating the Kremlins argument, the European Left, just like their patrons in Moscow, never made clear how Russia would be threatened by the missile defence shield and what kind of proposals could be made to find a compromise between Russia and the U.S.

While the proposed ground-based interceptors (GBI) in Poland and a radar in the Czech Republic could not harm the Russian strategic deterrent (see chapter below), they nevertheless served as a deterrent against Russia – but from a very different angle. The new Eastern-European member-states of NATO were eager to host the U.S. missile-defence installations. Their argumentation and manoeuvring was similar illogical than that of their leftwing counterparts in Western Europe, just with a different normative notion. Poland for example, demanded additional U.S. funds to upgrade its air-defence system in case of a Russian attack. The GBI in Ustka were – following the Polish line of argumentation – increasing the likelihood of a Russian attack on Poland, so America had to compensate the higher security risks, it burdened on his ally.⁶⁹ Thereby Poland as well as the Czech Republic proved to be hard negotiators, pressing for more and more concessions from Washington. Later, when Obama changed the European missile-defence architecture, the popular sentiment went like “the United States have abandoned us for Russia”.⁷⁰ If so, why did they bargain for compensations in the first place?

For the Eastern European countries it was foremost important to have some U.S. permanent military installations of strategic value for Washington on their soil.⁷¹ Being a part of Russia’s proclaimed sphere of interest,

means that Russia is still questioning not only their alignment with the West, but also their political and territorial independence. Therefore the defence against Russia is the prior concern for defence planners. Given the decreasing trust of these countries in their Western-European allies, especially those who are reluctant to sacrifice their special economic relationship with Russia, they do not take NATO Article 5 for granted. Likewise, the development of NATO from a defensive to a crisis-management organization heavily involved in Afghanistan and transforming the militaries towards foreign deployment and unconventional warfare abilities, does not support their strategic needs. The Baltic States as well as Poland tried to persuade NATO towards convincing commitments towards territorial defence – without any results.

The hosting of permanent missile-defence installations would have offered a special status in American strategic calculations. The change of the strategic situation after the cold war might have decreased the importance of Europe in comparison to other states close to the Middle East, but missile defence – especially when regarding to the defence of the U.S. homeland – would persistently play an important role in American strategic calculations. Therefore it was a plausible calculation, that in case of confrontation with Russia, the United States would not allow their installations to be overrun by a Russian invading force, thereby supporting and if necessary defending Poland against Russian expansionism. The very quick ratification of the “Status of Forces Agreement” (SOFA) with Poland after the Russian-Georgian War in 2008 underlined the strategic calculations of the Eastern European countries.⁷² The treaty included a special security clause, that in case of a Russian attack, the United States would support Poland, regardless whether NATO decided on Article 5 or not.

Likewise, when negotiations with Poland were difficult, other former Warsaw-Pact or Soviet Union states tried to jump in and host the American system.⁷³ These considerations are understandable from their point of view. The historic experience of these societies with Russian supremacy was rather traumatic. Russian-speaking political elites may watch Russian departure from democracy, the radicalization and militarization of Russian foreign policy and internal language much closer than those in Western Europe, who depend on the official Russian communication designed for the Western audience. That Russia never had accepted NATO eastern enlargement is generally noticed. To the new NATO members this means that Russia only has postponed attempts to regain or recapture its old sphere of influence and that Western military alignment is

the only means to prevent being submitted to Russian jackboots again.

Unfortunately unskilful diplomacy, hard bargaining and internal opposition within the new member states rather demolished the credibility of their security interests. Likewise

their Western-European allies did little to foster trust in NATO or the emerging role of the EU as a military alliance.⁷⁴ The author witnessed on various locations, that the concerns of these nations are met with little interests or even despise for “old cold war thinking” by the representatives from “Old Europe”.

3.) Missile Defence in Europe: GBI vs. SM-3

Having explored the strategic and political considerations, that influenced the decision to deploy components of the missile defence system in Europe, now some remarks have to be made about the different systems scheduled for deployment in Europe. Of course, this is not a technical examination of the possibilities of missile defence in Europe. Such an examination was done by Sequad-Base,⁷⁵ and is highly recommended for this matter.

But the technical possibilities of each system heavily influence the political-strategic considerations and options for the defence of the United States and Europe. So political or strategic judgments should not disregard the systems' technical capacities to intercept missiles and to protect certain areas.

3.a.) The Ground Based Interceptors or Ground Based Midcourse Defence Segment

With President Bush's deployment plan, the so called “3rd Site”, the American missile defence components to be deployed in Europe, would have incorporated an upgraded early-warning-radar in Thule (Greenland) and Fylingdales (United Kingdom), 10 Ground-based Mid-Course Defence Interceptors in Redzikowo close to Ustka⁷⁶ (Poland) and a X-Band fire control-radar in Brdy (Czech Republic).

Both of the long-range early-warning radars are upgraded AN/FPS-115 radars, stemming from the cold war times. The 3000nm (about 5500km) range radars work within the UHF-frequency band (so called S-band, wavelength $\lambda \approx 0,7\text{m}$), have an antenna-diameter of 25,6m, and a peak power of 0,87MW.⁷⁷ The Radars are very well suited for the detection and tracking of the incoming missiles. In theory the Fylingdales-radar could provide a data-link for the intercepting missile during the whole flight and interception phase against any missile flying from the Middle East to the United States. Compared to the X-band radar in Brdy it would perform better to this job – in terms of range and missile-detection. However the radar has weak “discrimination”-abilities. With a relatively wide radar-beam ($\Theta = 24,2\text{mrad}$)⁷⁸ it is not able to distinguish the warhead from decoys or the separated third stage of an incoming missile. The whole target-cluster (warhead(s), decoys, stages and other parts of the missile) would be traced as one target. The infrared-seeker of the

missile would have to pick the right target, making target approach difficult and increasing the chance of hitting the wrong one. Likewise, the S-band radar would be unable to verify a kill by the missile or distinguish an intact re-entry-vehicle from other debris of a previous interception.⁷⁹

The Russian radar station in Gabala, which was proposed by Putin as a substitute for the 3rd site, operates with an even longer wavelength (VHF frequency, 150-200 MHz, $\lambda = 1,5\text{-}2\text{m}$).⁸⁰ This radar would not be capable to distinguish between various targets or verify a hit. It would at best – if integrated into the American system – be an additional early warning station, but it could not serve as fire-control radar for a precise missile defence system. The Russian missile-defence system, which this radar serves for, relies on space-detonated nuclear warheads to destroy incoming missiles. Precision-guidance is not needed for this method.

In Brdy the fire control radar would have been installed. The GBR-P X-band radar is based on the land-mobile THAAD-GBR, using probably the same transmitter modules, but in a quite larger and much more powerful version. The Antenna would have had an effective antenna-area of 104m² (123m² maximum), about 81000 transmitting modules and a peak power of 0,81MW.⁸¹ From the term of resolution (radar-beam-width of $\Theta = 1,8\text{mrad}$),⁸² this radar would have the high resolution requested. But the low output of power would significantly reduce its effectiveness. Due to the low power transmitted toward the target, the radar-beam would have to illuminate the enemy re-entry-vehicle for a long time, to make detection possible.⁸³ Given the high radial speed of the target (changing angle of sight from the radar towards the target), the re-entry vehicle would leave the radar-beam before it would have been sufficiently illuminated.⁸⁴ Especially the identification of the various targets within the target-cluster would not be possible until it is too late for an interception by the GBI.⁸⁵

Why would the United States invest so much money and political effort to deploy an unsuited radar? The radar, which would have been installed in Brdy, would have been taken from the Kwajalein Missile Range.⁸⁶ In this test-configuration it was not fitted out with all of the

transmitter/receiver-modules, which could possibly be installed on the antenna. According to Sequard-Base, about 20%, or 81,000 of the 405,000 modules (10W maximum power each) are installed, resulting in a reduced effective antenna-area of about 25m².⁸⁷ According to Jane's Strategic Weapons Systems, the 9,2m²

antenna of the THAAD-GBR is carrying 25,000 modules⁸⁸ (6-8W maximum power each) of the same kind. Applied to the Brdy-antenna, the radar would mount about 282,000 (for a 104m² antenna) to 334,000 (123m² antenna) modules when fully equipped. The then maximum output is easy to estimate:

Modules	405000	334000	282000
Max Power 10W/module	4,05	3,34	2,82
Max Power 8W/module	3,24	2,67	2,26
Max Power 6W/module	2,43	2,00	1,69
Average Power 2.1W/Module	0,85	0,70	0,59

Table 1: Calculated maximum and average power of the fully equipped Brdy-radar-station.

Taken the various numbers from the literature, a fully equipped GBR-P Radar in Brdy would have a maximum power from 4.05MW to 1.69MW and an average power output from 0.85MW to 0.59MW, compared to 0.81MW maximum and 0.17MW average emitting-power in the Kwajalein-configuration. This increase in power would facilitate the detection of the target-cluster and the discrimination and identification of the various kinds of targets, as well as the verification of a possible hit by the interceptor.

While the opposition against the 3rd-site in the Czech Republic was primary concerned on health and environmental effects of the emitted radiation, it is not unlikely that the U.S. administration "did not mention" that the antenna had the growth-potential towards a much more powerful emitter.

The Russian argument, that the U.S. radar would look deep into Russian airspace, however, is quite flawed. Although the theoretical range of the radar is 5,000km (practical range of course depends on radar-cross-section, speed and angle of attack of the target), the Earth is round! The horizon does definitely limit the radar's ability to observe the Russian airspace! Anything Russian launched to space would be detected from satellites first. Additionally, the Fylingdale radar has an enhanced detection range and ability against Russian missiles compared to the Brdy-station, but the existence of this radar-station never upset the Russian security establishment. Last but not least, 10 ground-based mid-course Defence Segment Interceptors (GBI) would have been deployed at a fixed site in Redzikowo close to Ustka in Poland.⁸⁹ This missile is based on the commercial satellite carrier Taurus XL, originally a three-staged design, being 18.8m long, having a total launching weight of

22500kg, carrying a 63kg kill-vehicle. For the planned base in Poland, a two-staged version would have been used, abandoning the original third stage and carrying the same kill-vehicle. Mass would be reduced to 21607kg, the total boost-phase would last 134.4 instead of 198.2 seconds, reaching a final burnout speed of 7.0 to 7.8km/s instead of 7.8 to 9km/s.⁹⁰

This two-staged design was chosen for various reasons. First, solid-boosters may not be switched off during flight, so the separation of the kill-vehicle and therefore the final approach on the target may only be initiated after all stages have burned out. As an IRBM heading towards Europe would have a shorter flight-time than an ICBM from North Korea to the United States, the earlier burnout of the two-staged interceptor is an advantage for target-interception at closer ranges.⁹¹ Second, as argued below, it is far more difficult or even impossible, to intercept Russian missiles heading towards the United States with the slower, shorter-ranged two-stage GBI.⁹² This is one of the key findings of Dr. Sequard-Base's work and supports the American argument, that the Russian objections against the Missile Defence System are ungrounded!

To successfully intercept an incoming missile, the kill vehicle has to destroy the warhead by hitting it, relying on the kinetic energy of the kill vehicle only. No explosive charges (in space vacuum, this would be pointless anyway) or directed shrapnel are used to achieve the effect. An imaging infrared sensor on the kill-vehicle provides the guidance, side thrusters are used to manoeuvre. To destroy a re-entry-vehicle successfully, the kill-vehicle has to achieve a certain impact velocity to deform the re-entry-vehicle. If the re-entry vehicle is just slightly touched by the kill-vehicle, it will be "disturbed" and maybe slightly deflected, but not destroyed.

Previous tests as well as life-fire-satellite-interceptions provide some rough assumptions, how much energy would be needed to destroy such a vehicle.⁹³

According to the computer-simulation of Dr. Sequard-Base, the two-staged GBI fired from Poland would be able to defend continental Europe, as well as the U.S. East-Coast from IRBM and ICBM launched from the Middle East. Without a launching-site in Europe, the defence of the U.S.-East-Coast from ICBM launched in the Middle East would not be possible.⁹⁴

The deployment of a three-staged GBI in Europe would have facilitated the defence of the U.S. homeland, being better suited intercepting ICBM close to their apogee. The three-staged system would have been more capable of intercepting missiles reaching for the very south of Europe. But a three-staged interceptor could also bring the Russian ICBM, heading for the United States, in range. To address Russian concerns about the balance of power, a two-staged design was chosen.

Certainly the two-stage GBI was not capable of defending Turkey.⁹⁵ But the two-stage system had no chance to successfully intercept Russian missiles heading for the United States. Simulated SS-25 and SS-18 attacks on the US show, that the two-staged GBI is too slow to reach the Russian missiles. It would reach them from the side or a rearward angle, making destruction less likely, even if the warhead is hit. The Topol-M is a solid-booster missile, accelerating very fast, leaving the effective firing-perimeter of the Ustka-based two staged GBI too quickly. The liquid-fuelled SS-18 is slower in acceleration, but reaches a higher burnout-speed and range, thereby firing at a higher angle towards the same targets in the U.S. Thereby this missile would not only be out of the range (in terms of altitude) of the Ustka-based missiles, but would also “hop over” the Alaska-based interceptors, which could intercept some Russian SS-25 heading for the West Coast.⁹⁶

Installing a three-staged GBI would give the system a very narrow chance of intercepting the Russian missiles.⁹⁷ For an interesting detail: if due to Russian political opposition to the sites in Poland the United States would have moved the site to Scotland, installing a three-staged interceptor, the defence against Russian missiles would be feasible.⁹⁸ A base in the U.K. was at least debated in expert circles, and Russia never objected the U.K or U.S. based installations that aggressively and boldly as it did those in Eastern Europe. Aggressive rhetoric almost talked Russia into a real strategic disadvantage opposite the United States.

3.b.) The SM-3 System Family

When President Obama decided not to deploy the 3rd site of the U.S. missile defence shield in Europe on September 17th 2009,⁹⁹ the administration announced that it would substitute the old site by several smaller, mobile systems, based on the “proven” naval SM-3 missile. Later on, a four-phased plan was announced for the new missile-defence architecture for Europe:¹⁰⁰

- Phase I (off 2011): Sea-based Standard Block IA on Aegis-cruisers and destroyers in the waters around Europe will be an initial curtain, land-based Patriot PAC-3 and THAAD-Systems will supplement this for point-defence tasks. Mobile THAAD-GBR (TPY-2) Radars should compensate the missing radar in Brdy.
- Phase II (off 2015): In this phase the more capable SM-3 Block IB missile would be added, as well as a shore-based Aegis-system (SPY-3 Radar) and an own fire-control network. “Skeleton crew” Aegis ships, based in Europe, are considered too.
- Phase III (on 2018): This phase would see the introduction of the much more capable SM-3 Block IIA missile, capable of intercepting IRBM.
- Phase IV (on 2020): Finally the further improved SM-3 Block IIB would be introduced for the missile-defence of Europe.

The SM-3 is derived from a family of naval anti-aircraft missiles developed in the 60s to replace the RIM-24 Tartar and RIM-2 Terrier missile families.¹⁰¹ The medium-range RIM-66 (SM-1) and long-range RIM-67 (SM-2) and her multiple variants provided the primary ship- and fleet-anti-aircraft defence system for the U.S. Navy as for many other NATO and allied navies. Latest Version is the RIM-156B SM-2ER block 4A, a long-range naval air defence missile, capable of intercepting tactical (short-range) ballistic missiles and cruise missiles as well as other aerial targets.¹⁰²

The three-staged RIM-161 SM-3 was developed from this missile with the particular task of serving as sea-based mid-course defence segment. Of all the planned missiles to be used in Europe, today only the SM-3 Block IA is operational on board of four Aegis cruisers and 16 Aegis destroyers.¹⁰³ 32 of these missiles have reached the U.S. inventory jet. The missile has an overall length of 6.5m, 0.34m missile and 0.53m boost motor diameter and a launching weight of 1505kg.¹⁰⁴ The burnout speed is about 4km/s.¹⁰⁵ As with the GBI, the warhead of the

SM-3 consists of a “hit to kill”, infrared-guided vehicle with reduced weight.¹⁰⁶ The slow burnout speed, as well as the light kill vehicle poses several limitations to the missile. For theatre defence, it is only suited to engage missiles with a range of 1,000km. It was designed as naval fleet midcourse defence segment for the East Asian theatre. To defend South Korea or reinforce the missile defence shield in Japan, the missile’s capabilities are well enough. Likewise, it was only tested against single-staged missile-targets with a range up to 1,000km.¹⁰⁷ But Iranian missiles that could reach U.S. bases in central Europe or any major European capital have to have a range of 3,000 to 4,000km. The newer Block IB, scheduled for 2009 but still under development, has the same kinetic performance as the older missiles, but a more capable, dual-colour seeker, increasing the seeker’s ability to distinguish between the actual warhead, the burned-out last stage of the missile and IR-counter measures.¹⁰⁸

The new RIM-161D SM-3 Block IIA missile will be jointly developed by the United States and Japan. While retaining the designation of the old standard missile, it is rather a new missile than an improved Version of the SM-3. Only the kill-vehicle and the first-stage boost motor will be the same. The second and third stage motor will be considerably bigger, having a 21inch (53.3cm) diameter instead of the 34.2cm of the Block I variant.¹⁰⁹ Burnout speed should reach a maximum of 6km/s.¹¹⁰ Steering manoeuvres in the atmospheric phase of the flight may reduce this to 3.1 to 5.4km/s.¹¹¹

The missile is designed to cram as much performance as possible into the restricting measures of the Mk.41 launching canister.¹¹² The length of the strike-module version of this system, which is installed in the larger ships as cruisers and large destroyers, is 7.6m (25 feet) long. All canisters have a maximum load diameter of 21inch (53.3cm), stemming from the possibility to launch the Tomahawk cruise missile from these canisters. Therefore 0.533 by about 7.5m will be the maximum length of any further SM-3 version, otherwise it would be too big to fit into the ships it should serve on. If compared to the about 15 to 17m missile length and 1.27m missile diameter of the two-staged GBI is obvious that even the most improved SM-3 will never be that capable as the Ground Based Interceptor.¹¹³

It is worth to mention, that up to now, ships were the only launching platforms for the SM-3. There is no vehicle or even system concept about a land-based SM-3. This would have to be designed from scratch.

In the Obama-plan, a deployment of Patriot PAC-3 and THAAD missiles in Europe is

planned too. To evaluate their value for the Defence of Europe, one has to distinguish between area defence and point-defence. Generally, the range of a defensive missile also depends on the speed, course and manoeuvrability of the target. The faster and long-ranging the intercepting missile is, the higher is its possibility to reach faster missiles, with a flight path that passes the launching sites at greater distances. If the kinetic characteristics of the interceptor are considerably weaker compared to those of the attacking missile, the defending missile can only intercept the incoming missile successfully, if it is heading towards the launching site or towards an object very close by. Then the interceptor can manage to reach a collision course with the attacking missiles.

The Patriot Pac-3 and to a larger extend the THAAD may be used as an area-defence weapon against short-range ballistic missiles. For the Patriot missiles, SCUD-like missiles with a range of about 300km are the preferred targets. The THAAD – a missile 2.32m long, 0.34m diameter, and a burnout-speed of about 2.8km/s – can defend a certain area against such threats, as well as intercepting larger missiles with a range of up to 1,000km. But area defence against incoming IRBMs and ICBMs is impossible.

At best the PAC-3 and the THAAD might be integrated into a wider missile defence effort as a point-defence weapon against the re-entry vehicle. If the launching-site is very close to the target area, and the re-entry vehicle is more or less heading towards the launching site, the missile has a certain chance of intercepting the incoming warhead. So installations of a very high strategic value – like the missile-defence installations in Poland would have been protected by Patriot-missiles, or the U.S. base in Okinawa – may additionally be protected by these systems. As these bases and areas are threatened by MRBM, the deployment of the PAC-3 and the THAAD in East Asia against North Korean No-Dong or in Poland against Russian SRBM from Kaliningrad would make some sense. They would be suited to defend Turkey and the allies in the Middle East, threatened by shorter-ranged missiles. But to protect the whole of Europe with these systems is impossible! The U.S. would have to plaster the whole continent with missile batteries!

Likewise the radars of the now proposed missile shield for Europe were designed for different tasks and have to be adapted for their new purpose. The Aegis-radar, designated AN/SPY-1D, consists of four (one for each direction) 3.65x3.65m antennas ($A_{\text{eff}} 13.32\text{m}^2$) containing 4,350 transmitting/receiving elements with an operating wavelength of 2 to 4 GHz (S-band).¹¹⁴

This radar is well suited tracking aircrafts or tactical ballistic missiles (not separating the small warhead from the missile), especially at lower altitudes. But there may be doubts whether the radar might be able to distinguish the warhead from missile debris at great distances. IRBM heading for Europe reach apogees over 2000km, passing by the launching site for sometimes more than the same distance. A minimum resolution below $\Theta \leq 2.4\text{mrad}$ is required.¹¹⁵ The AN/SPY-1D reaches about 2.1mrad ,¹¹⁶ – just within the limits.

The THAAD-GBR radar, or AN/TPY-2, on the contrary, operates in X-band, using the same transmitting/receiving elements as the radar station in Brdy would have used. But the antenna is considerably smaller than the radar that would have been installed in the Czech Republic. It operates 25,344 modules on a 9.2m^2 antenna,¹¹⁷ with a maximum output of 8 to 10W each.¹¹⁸ This would be a maximum output of 202.7 to 253.4KW for the whole antenna. If the previously planned antenna for Brdy (0.81MW) was underpowered, how about the AN/TPY-2? According to Jane's, the radar has a range against ballistic missiles of about 1000km. Concerning the horizontal range, a chain of radars could compensate for the individual range. But for example an R-14 IRBM has an apogee of over 1000km from a program-angle of 17° upwards.¹¹⁹ There is no vertical radar chain. The radar would perform very well for its designed purpose: searching, identifying, and tracking short- and medium-range ballistic missiles and guiding the THAAD to intercept them. But to track IRBM heading for central Europe, not to mention ICBM heading for the U.S., and guiding the intercepting missile

towards them, probably is out of the range of this radar. In the old deployment-plan, the AN/TPY-2 would have been used as land-based forward-observing platform, tracking the enemy missile during the ascending flight phase, but not during the whole flight-path. It is uncertain, whether the U.S. is planning to enlarge the AN/TPY-2. Certainly an enlarged and more powerful version would perform better, but this would then pose difficulties for the transportability and mobility of the system, as well concerning the maintenance and supply of the then to be enlarged mobile power stations.

Of course, the new system will not be blind. Just like the planned, but not realized 3rd Site it will be supported by the early-warning stations in Thule and Fylingdales. And just like with the old system, satellite early warning and tracking will play a critical role for mission success.¹²⁰ If the missile would have to rely on the Fylingdales-radar only as a source of target-data for the interception, the missile's IR-seeker itself has to distinguish between the actual warhead and other objects in the target cluster. And, it will be hard, if not impossible to verify a successful interception and determine whether the warhead has been destroyed from the ground. This will pose serious limitations to the system's strategic value.

An operational space-based detection and tracking system would greatly enhance the discrimination abilities of both of the systems. However, this is not to be expected to be operational very soon, so any missile defence system (regardless the missile chosen for interception) would be of limited operational capacity for the time being.

4.) The Shift in Europe and Obama's Strategic Considerations

The decision not to deploy the 3rd-Site in Europe but to rely on the planned land-based SM-3 was widely debated in the U.S. and – except for Poland and the Czech Republic – highly welcomed in Europe. The arguments of the Obama-administration are well known. On September 17th, the President stated that: “This new approach will provide capabilities sooner, build on proven systems, and offer greater defenses against the threat of missile attack than the 2007 European missile defense program.”¹²¹ Further he noted: “First, we have updated our intelligence assessment of Iran's missile programs, which emphasizes the threat posed by Iran's short- and medium-range missiles, which are capable of reaching Europe. ... But this new ballistic missile defense program will best address the threat posed by Iran's ongoing ballistic missile defense program.”¹²²

Likewise, Secretary of Defence Robert M. Gates defended the President's decision. “The future

of missile defense in Europe is secure. This reality is contrary to what some critics have alleged about President Obama's proposed shift in America's missile-defense plans on the continent — and it is important to understand how and why”;¹²³ he reassured the public in September 2009. The first argument for the new system would have been a faster realization of the missile defence shield. “First, to be clear, there is now no strategic missile defense in Europe. ... That plan would have put the radar and interceptors in Central Europe by 2015 at the earliest. Delays in the Polish and Czech ratification process extended that schedule by at least two years. Which is to say, under the previous program, there would have been no missile-defense system able to protect against Iranian missiles until at least 2017 — and likely much later.”¹²⁴ The first SM-3 would be deployed in Europe by 2011, the second phase, enhancing the missile shield's capabilities in 2015. The new system therefore will be ready

earlier than the previously planned system.¹²⁵ Then, Gates stated that the SM-3 would be better suited for defending Europe against short- and medium-range missiles. “The SM-3 has had eight successful tests since 2007, and we will continue to develop it to give it the capacity to intercept long-range missiles like ICBMs. It is now more than able to deal with the threat from multiple short- and medium-range missiles — a very real threat to our allies and some 80,000 American troops based in Europe that was not addressed by the previous plan.”¹²⁶ Moreover he argued that the new set of sensors will be more capable than the old one. “Moreover, a fixed radar site like the one previously envisioned for the Czech Republic would be far less adaptable than the airborne, space- and ground-based sensors we now plan to use. These systems provide much more accurate data, offer more early warning and tracking options, and have stronger networking capacity — a key factor in any system that relies on partner countries.”¹²⁷

Furthermore, the decision has been highly welcomed by the academic society in Europe. In euphoria about the news, Mark Fitzpatrick wrote: “President Barack Obama’s decision to substitute a mobile adaptable missile shield for President George W. Bush’s plan to deploy silo-housed missile interceptors in Poland and an advanced tracking radar in the Czech Republic was wise on multiple grounds. Whether judged on its technical, military, strategic or diplomatic merits, the new missile-shield deployment plan is far superior to the dubious system it will replace.”¹²⁸

Given the concerns about the missiles and sensors used in the new missile defence plan, these statements given by President Barack Obama and Secretary of Defence Robert M. Gates seem to be doubtful. After a critical re-examination of these statements, they rather seem to be addressed to silence critics in Eastern Europe and the Republican opposition, than carrying any information about the goals and considerations of the U.S. policy.

4.a.) Can Europe be Defended with the New System?

With the RIM-161C SM-3 IB a defence of Europe as a continent is not feasible. The missile is too small and was designed for different purposes than for continent-wide missile defence against Intermediate-Range Ballistic Missiles (IRBM). As U.S. officials claim, it was successfully tested, but never against a missile-target that could reach Europe. On September 28th Defence News published a map, showing the areas protected by possible Aegis-ships stationed in the littoral waters around Europe.¹²⁹ The graphic shows the limited range of the SM-3 Block I missile and the problem of the large continental landmass that restricts the

freedom of movements of the ships. While coastal or island nations like the United Kingdom or Israel could be protected, the bulk of the continent would not. Especially the U.S. bases in Germany could not be defended as such, further decreasing the strategic value of the new missile defence system.

Further considerations have to be made about the ships available for missile defence. The United States have a limited amount of ships capable of launching the SM-3. They have to traffic between their home bases in the United States, the East Asian or the European theatre respectively. In case of a confrontation with Iran, ships will have to be deployed in the Persian Gulf and before Israeli shores to protect local allies in the war theatre, as well as the airbases in the Region, then probably used by the U.S. Air Force.

After the retirement of the frigates (the last remaining Oliver H. Perry-class frigates were deprived of their missile launchers, thereby losing their anti-surface-force and air-defence capability) the 9,000ts Arleigh Burke class destroyers are the smallest general-purpose ships of the U.S. Navy, capable of engaging targets in every target spectrum (air, surface, submerged). 55 were commissioned by the end of 2009, a total amount of 62 ships were planned and ordered.¹³⁰ They are assigned of all kinds of tasks, starting from escorting the 11 carrier task groups (two for each task group) and amphibious task groups as well as protecting important shipping and patrolling the lines of communication. In case of a conflict or tensions with Iran, some of these ships will be detached to patrol the Persian Gulf and the Arabian Sea, protecting the oil shipments through these waters. Of course, missile-defence capable ships will be spared from second-rank tasks, but the additional tasks of defending Europe will further stretch the destroyer fleet. If Iran can hold up a high degree of tensions for more than six month (the normal revolving cycle of the U.S. Navy ships), it may seek an attrition of the destroyer-fleet simply by keeping them on extended patrols till the dockyards take their toll.

The President’s announcements seemed to have hit the U.S. Navy by surprise. By September questions on scheduled ships, timelines for deployments, patrol-areas and duties and crew-rotation could not be answered to Defence News. “Navy officials had few answers in the week after Defense Secretary Robert Gates announced the new BMD mission. Spokesman at the Pentagon and for the 3rd Fleet, which is responsible for Navy Air and Missile Defence Command, said officials were working on the details.”¹³¹ It is curious that the decision was made without letting the Navy pre-plan its execution. Given the bad performance of the

SM-3 Block 1 missile and the missing C² infrastructure in Europe, it is unlikely that the “Phase I” deployment of Aegis missiles was meant as a serious deployment anyway. Rather the 3rd Site has been abandoned and some symbolic destroyer patrols should ensure the European leaders that the U.S. still is committed to the defence of Europe.

Phase I is a jugglery, but how about the other phases? Would the more capable RIM-161D SM-3 Block IIA or Block IIB then change the situation? Even though this missile is far inferior to the GBI in terms of kinetic performance, it would have a certain chance of intercepting IRBM heading toward European capitals.

Compared to the GBI, the lighter kill vehicle, slower burnout-speed, and shorter boost phase make the interception more difficult than with the GBI. The light kill-vehicle might not have the kinetic energy to destroy the warhead of a re-entry vehicle for sure. At the same time it is more difficult for the S-band radar of the Aegis-ships to verify the kill or distinguish the possibly intact warhead from other debris. But the missile has a certain chance to intercept, if deployed at a forward position. Dr. Sequard-Base called the sea-based missile defence situation for Europe (calculations made with the Block IIB version): “A seaborne alternative is welcomed, if nothing else is available. From the technical point of view, a solution relying on the planned sites at Brdy and Ustka and the two-staged GBI seems to be superior.”¹³²

But concerning the arguments of President Obama and his supporters, there are some other arguments to consider. First, the missile everyone is talking about is still under development. While taking one stage from the three-staged GBI was a rather minor conceptual change of the missile, (which should have been ready for testing by 2009),¹³³ the development off the SM-3 Block II is a major redesign of the previous missile. The deployment of the missile is planned for 2015.¹³⁴ Given the usual delay inherent to almost every defence project, the actual missile defence shield probably will not be operational until that date, Gates mentioned for the old 3rd Site. Anyways, the argument about being operational earlier is somehow dubious, given that both systems rely on the same yet to be developed and deployed satellites.

The same is true for the planned – or better: mentioned – land-based variant of the SM-3. There is no launching-vehicle, no C²-network yet. While the principle launching site for a GBI is developed and a proven concept (in Alaska and California), the whole land based family of the SM-3 has to be developed from scratch (if the AN/TPY-2 is picked for the radar, this at last is a proven design). From the European

perspective, one has to hope that the land-based SM-3 does not share the same fate as so many of the U.S. armed forces “next generation” weapons: too many requirements were crammed into too small platforms; and finally cancelled after the developing costs have risen beyond any previous calculation.

To refer to the 3rd chapter of this paper, the missile defence site was set up to fulfil a strategic purpose for the United States. That was to grant the United States more freedom of action in case of confrontation with Iran (probably not caused by the U.S. but as a reaction to Iranian action). The European allies, as well as regional allies in the Middle East should be reassured against the Iranian missile threat. The missile defence system should function as a “denial deterrent” towards Iran.¹³⁵ The United States wanted to increase their political options towards Iran by not relying on either nuclear deterrence or pre-emptive action only. Last but not least, they did not want to bind their strategic decisions to the special interests of their European or local allies by retaining control of the missile defence installations around the world.

Does the new Obama-plan for missile defence in Europe fulfil this purpose? Probably not. First, the key word to deterrence is credibility. With systems that could intercept an Iranian missile only on the very edge of their technological capabilities, the concept of missile defence for Europe is not very credible. There will be doubts on the system’s reliability and these doubts will influence decision-making: in Washington, and Europe as well as Tehran.

Second, by relying on seaborne and later on land based, mobile SM-3 missiles the United States had become depended on the goodwill of other nations again. For a seaborne defence of Europe, only the Black Sea offers good firing positions, from which the SM-3 might intercept incoming missiles. A permanent presence of U.S. warships in the Black Sea would either require a U.S. base in that sea or the permanent passage of U.S. warships through the Bosphorus. Both are objected by Turkey and Russia, the key players in the Black Sea. Turkey is very reluctant to grant the United States free access to the Black Sea. Given Ankara’s good relationship with both Moscow and Tehran (see chapter 5), is very unlikely that this position will change for the foreseeable future.

With the Montreux-Convention, that limits the traffic of military vessels through the strait, Turkey is in a very strong position. According to the convention, only one warship of a non Black-Sea nation may be stationed in the Black Sea at a time. The overall tonnage limit is 15.000ts per vessel, aircraft carriers and

submarines are generally forbidden to pass. Task forces of multiple warships may only stay for three weeks and are restricted to nine ships. Turkey has the right to close the street for Non-Turkish military vessels at will.¹³⁶ It is in the very interest of Turkey to maintain the Montreux-Convention; but it would pose a severe limitation to the missile-defence plans for Europe. The U.S. ship would have to operate alone, and Turkey could ask for any concession by the United States to further allow the passage of this ship.

With the land-based system, deployment should be less problematic. It would have to move (air-transport) to their launching positions, probably from Poland via Slovakia towards Hungary or Rumania. Given that the United States enjoys better relations with these countries than with Turkey, the movement should be easier. Nevertheless, the experience with the tough negotiations for basing the 3rd Site in Poland and the Czech Republic shows that even perceived “good friends” might be difficult.

4.b.) Unprofessional Decision or Strategic Choice?

One may wonder, why President Obama did decide to abandon the concept of the 3rd Site, obviously disregarding technical as well as strategic advantages of the system. In the public debate, various explanations for this decision may be found.

Some authors now saw coming what they feared would happen during the election campaign. In terms of foreign policy and military matters, Obama would behave inexperienced, short-sighted and his decisions would be rather driven by wishful thinking and ideology rather than strategic calculation. Unaware of the situation and confused by Russia’s opposition, he gave in.¹³⁷

Others celebrate the decision as a reach-out to Moscow.¹³⁸ Good relations with Moscow would be far more important for the U.S. than the defence against a threat that yet has to emerge (Iranian ICBM). For the conclusion on a successive strategic arms limitation treaty, a new treaty on arms control and verification in Europe and especially putting effective pressure on Iran to dismantle its nuclear programme, a good relationship with Russia would be needed.

Both arguments have some explanatory power as well as some shortcomings. It is hard to downplay the impression that was left by the Obama administration, that good relations with Eastern Europe were traded for good relations with Russia. “[The] perception prevalent around the world is that Washington tossed Moscow a big bone in hopes of facilitating negotiations on further nuclear arms limitations and of energizing the reset of U.S.-Russian relations.

Central and East Europeans – NATO members and aspirants – suspect they are becoming victims of Obama’s reset policy. At the very least, they now question the value of American commitments.”¹³⁹ The American President informed his NATO allies via phone call about his decision, giving them no chance to influence this or to debate the other keystones of the agreement, such as the planned technical cooperation with the Czech Republic and for Poland the special support-clause in case of a Russian threat. While the decision was welcomed in Western Europe, in Eastern Europe the first reaction were rather emotional. The coincident that Obama picked the 70th anniversary of the Soviet Union’s invasion of Poland (then being divided between Nazi-Germany and the Soviet Union) to reverse the missile defence plans for Europe contributed to the emotions. The U.S. administration could have handled this question in a more professional way.

But did Obama trade his relationship with Eastern Europe for a better understanding with Russia? Or did he really expect to do so? Even prior to the missile defence-decision, many experts doubted that the 3rd Site itself was objected by Russia.¹⁴⁰ The Russian opposition was rather pointed towards all formalizations or symbols of the shifting influence in Eastern Europe from the once dominant position of the Soviet Union to the rather marginalized role of today’s Russia. “Despite its shrill rhetoric, Russia never feared the modest missile defenses to be deployed in Central Europe. It disliked the geopolitical symbol of American strategic cooperation with Central European countries, particularly Poland, which Moscow understands must become America’s major European strategic partner in the coming decades.”¹⁴¹

In terms of balance of power (or balance of influence) on the European Continent, the shift in missile defence was a rather minor – if not negligible – accommodation. For this, Russia will and would not offer much. As seen in chapter five, Moscow soon found some other critical points about the new missile defence plan, and continued to press its interest in the negotiations about a future arms control treaty and Iran as it did before. “Now – whatever it says or even thinks – Washington has made a major concession without so much as a thank-you from Moscow.”¹⁴²

Despite of the applause from the European left, it is hard to imagine that the Obama administration ever thought that this decision could serve as a reach-out to Moscow. The offer to abandon the 3rd Site in exchange of a more cooperative Russian approach to Iran was made by Obama in Spring 2009. Russia’s answer was negative.¹⁴³ The Russian position on strategic

arms-control and verification is difficult for many reasons, not only missile defence. And if it was meant as a goodwill-offer for the arms-control negotiations, Obama would probably have used the chance to announce this decision on one of the many meetings with Russian President Medvedev, to put pressure on him to announce some goodwill-offer too.

It is hard to imagine, that Obama never got a briefing by MDA-officials about the difficulty or impossibility concerning the interceptions of Russian ICBM aimed at the United States. If Russia objected not for the cause (balance of deterrence), but saw objection as a reason for itself, appeasement by concessions in the cause will not work. This logic is as simple as it is obvious from the Russian behaviour. But what, if not Russia was the focus of Obama's considerations?

Again, there is no satisfying official answer to that question. As discussed above, official communications and statements by the President, the Secretary of Defence or Secretary of States make little sense. No-one expects the President to make pointless decisions on reasons easily to falsifier. Alternative reasons could have been on the mind of the President, but were not communicated as such for several reasons. Of course, these considerations are of speculative nature – at least to certain extend. But they would explain the President's behaviour reasonably. In this case, the following premises have to be made about the new direction of Obama's foreign-policy course:

1. The ideologically driven role of the United States as leading nation in the struggle to defend and expand democracy as the primary form of governance was dropped. The foreign-policy agenda was redesigned according to immediate goals and gains of the United States. Whatever said about visions, ideals, and multilateralism, the Obama-administration is very focused on the American national interest in terms of strategic and economic gains.
2. The direct military involvement of the United States in regional theatres has to be reduced. The United States have to move from primacy to offshore balancing.¹⁴⁴ For both Iraq and Afghanistan, the discussion is about withdrawal. In Afghanistan, this is far more distant than in Iraq. But there is no intension of a direct involvement in Afghanistan, once the situation is that "stable" that a return to power of the Taliban is very unlikely. Not to mix it up: Obama is no isolationist! The United States will not withdraw their forces from overseas, or seek disengagement at all costs. But the regional security situation should be handled by strengthened regional

allies, which are supported by the United States. This support is vital in those fields, where the allies' capabilities are weak (for example air-, naval- and information warfare). This statement may hurt hard-line Democrats, but Obama carries on the foreign-policy course, Richard Nixon took in the 1970s.

3. Not only due to the financial crisis, but also due to more expensive internal policies as well as the large foreign debts of the United States, spending has to be cut wherever possible. The United States will not shoulder costs of projects that benefit others in the first line, and if there are multilateral benefits to American initiatives, costs should be multilateralized too.

These new paradigm neither sound irrational nor shortsighted. Yet, applied to missile-defence in Europe, they call for consequences and could explain Obama's decision from September 2009.

For reason one and two, the security-concerns of the old European continent will loose – and has lost – priority compared to other world-regions. Yes, the continent consists of democracies, hold the cultural roots of the U.S. and is somehow – but differently – committed to free trade, democracy, and human rights. But so what? The continent is stable and secure. Wirth the exception of the Russian nuclear arsenal, it can deal with all possible security-threats on her own, including the conventional military potential of Russia.¹⁴⁵ The European nations are allies to manage the difficult theatres in Iraq and Afghanistan. But their will to do so is declining, only few states can contribute significant amounts of troops and money and this kind of direct involvement is to be avoided in the midterm future. On her own, Europe is not a stabilizer of another region, especially not Asia and the Middle East – the future and current focus of American foreign policy. This loss of priority also refers to missile defence. The European continent may be defended, but its defence is not the top priority.

To secure a smooth withdrawal from Iraq and to then counterbalance Iran in the Middle East, Turkey will be far more important to the United States than – for example – Poland. Turkey's geographic position, her cultural heritage, and special role as the only Muslim country attached to the West via NATO make Turkey an ideal candidate for a counterbalancing-force against Tehran's growing regional ambitions. The United States and particularly President Obama has launched several initiatives to create closer ties with Ankara.¹⁴⁶ These initiatives are not meant – as some idealist may guess – as a generally, morally driven re-approach to the Muslim world, after the Bush-administration's

perceived mistakes toward this part of the world. They follow a very practical blueprint. First, the main obstacle to good relationship with the new Iraq should be solved: the Kurdish issue. Second, the regional influence and prestige of Turkey should be enhanced by supporting her bid for EU-membership. Third, her new identity as a moderate-Islamic nation should replace the traditional Turkish nationalism to ease tensions with Turkey's neighbours and make Turkey an acceptable role model or lead-nation for the region.¹⁴⁷ Last but not least, a robust strategic partnership should bind them to the U.S. and a common understanding of the Iranian threat.

To support this goal, the old 3rd site was not that useful. The Ustka-based GBI could defend Europe, including large parts of Greece, but could not defend Turkey. Thereby the United States left the impression that security within NATO was dividable, and Turkey was on the wrong side. On the contrary, the new system seems to be tailor-made to defend Turkey, as well as other allies in the Middle East. The new system is designed against the mentioned short-to medium-range missiles, Iran is deploying in large numbers. These missiles can't reach Europe, but they reach Turkey. Likewise, the United States seek to invite Turkey to participate in the U.S. missile defence effort and are very actively trying to sell the Patriot PAC-3 to Turkey.¹⁴⁸ Not to mention, that a land based SM-3, as well as the AN/TPY-2 radar would do a good job for area-defence in Turkey, as well as

other allies in the Middle East (Egypt for example). Range and technical characteristics of the attacking missiles would be ideal for the purposed systems to intercept.

Last but not least, Europe can afford missile defence on their own. When Obama mentioned that the new system would rely on allies and partners, he meant a multilateralization of the costs. The United States will not – like it was planned with the 3rd Site – take all the financial and political costs for the defence of Europe. Israel has demonstrated that even small states can make substantial contributions to missile defence. Japan is co-financing (and co-developing) the SM-3 Block II. It would not be a surprise, if NATO – which means Europe – will be asked to contribute to Phase II onward to the missile defence effort.

Whether Turkey is able or willing to play the role designed by Washington in the Middle-Eastern Theatre is a very different story (see chapter 5 below). Now Turkey is in the very centre of the calculations around missile defence, whether this kind of attention pleases Ankara or not. One will see in the mid-term future, if Obama's decision was right and Turkey – or to a lesser extend Russia – was key to solve the "Iranian Problem"; or if the decision was based on wishful thinking and an illusive picture of an ally, that in reality has changed its strategic priorities from Washington towards the East.

5.) President Obama's Missile Defence Initiative and Reactions from Russia and Turkey

5.a.) *Russia*

The fact that the Obama administration may not be as hawkish on the missile defence deployments as its predecessor certainly is no surprise. Missile defence was the Bush administration's number one security priority when it came to power in 2001. Since 2008 the Bush administration had been pushing especially hard to lock in the missile defence agreements to some extent because it was playing against the clock and wanted this as part of its legacy. The Obama administration does not face that pressure on time, but the urgency to get Iran to back off from its programme grows every day as it enriches more uranium. Given new cost constraints and persistent questions about the effectiveness of the missile defence technology, the Obama administration might not be giving that much away by agreeing to delay deployment *pending a new assessment of the threat* (author's italics).¹⁴⁹ Despite the more relaxed attitude of the Obama administration about missile defence the rancorous debate about a European-based missile defence system continues to hover over

the Russian-American relations. In testimony before the Senate in June 2009, Robert Gates, Secretary of Defense, hinted that portions of the system, including an advanced radar facility, could be sited on the Russian territory. This was met the following day with a denial by the Russian Ministry of Foreign Affairs (MoFA). At the Moscow summit in early July 2009 President Obama and his team agreed to push forward with the missile defence system as planned, and Obama told President Dmitry Medvedev that the United States and its partners planned on having the system deployed by 2013. Obama and Medvedev said that the two governments would continue to discuss this issue, but it seems that negotiations have gone as far as they can for the time being.¹⁵⁰

President Obama's Difficult Decision and Russia's Initial Reaction

Following an updated assessment of the Iran's missile threat, on 17 September 2009 President Obama announced that he had made the difficult decision to cancel long-standing US

plans to deploy elements of a global missile defence system in the Czech Republic and Poland. At the same time, the US military has achieved major progress with its shorter-range missile defence systems – the sea-based Aegis systems equipped with Standard Missile (SM)-3 interceptors, and the land-based terminal high-altitude area defence interceptors (THAAD). Washington plans to use these systems to create new missile defence architecture for Europe by 2020.¹⁵¹ We need to emphasise that an initial reaction coming from Moscow was positive. According to Andrei Nesterenko, spokesman of the Russian Ministry of Foreign Affairs, Moscow was ready for detail discussion with the United States on co-operation on missile defence. He added that ‘Obama administration cancellation to deploy missile defence shield in the Czech Republic and Poland was a step in the right direction’. Revision of American plans regarding missile defence open new avenues for Russian-American co-operation in missile defence.¹⁵² In an interview James Collins, former Ambassador to Moscow, said that the Russians have now essentially welcomed the decision. They have been saying now in the last few days that the new system, which is indeed going to give us missile defence capability in Europe, is not a threat to the Russian Federation – and that is a very different story from what they were saying about the previous system. He added that ‘He would frankly say that it is probably true that there are plenty of people on each side who have great doubts about co-operation in missile defence and whether it is really going very far. I think there is going to be a lot of internal debate on both sides about how far you can go, what is possible. I just hope that we will have a serious exploration of the potential for co-operation as we move forward.’¹⁵³ As we will see below, former Ambassador Collins’s assessment that the Russians have essentially welcomed the decision was only partly correct. The Russians remain apprehensive and suspicious of a new American missile defence project and the recent announcement by Vice President Joseph Biden that the SM-3 interceptors are to be based in Poland and would be deployed in 2018¹⁵⁴ has not alleviated Russian concerns.

Although the Obama administration cancelled the construction of the missile defence shield in the Czech Republic and Poland, the Kremlin might quickly find some new reason to be upset with the United States. After all, Washington has not rejected *all forms* (author’s italics) of missile defence. Why not, then, raise the alarm about the inevitable concentration of US naval forces ‘close to our borders’? Dmitry Rogozin, Russian Ambassador to the North Atlantic Treaty Organisation (NATO), has already rushed to declare that ‘A ship can change its position, and if a missile defence system is onboard, it is perfectly obvious that the ship can be

redeployed in a conceivable time frame, to a conceivable region, including to Russia’s shores.’ While they are at it, Russian officials might as well demand that the United States *completely reject* (author’s italics) any plans for a missile defence system and that they return to the Anti-Ballistic Missile Treaty (ABMT) signed by Richard Nixon and Leonid Brezhnev in 1972.¹⁵⁵ Although several officials and commentators have expressed optimism about the new missile defence plan, these comments were accompanied by sceptical statements from within the Russian armed forces. There is a concern among more conservative elements of the military that nothing, in reality, has changed and that the reconfigured plan continues to represent a strategic threat both in terms of the possible location of the SM-3 interceptors and their continued technological development. Nikolai Makarov, Russia’s Chief of the General Staff, stated in an interview with journalists on 21 September 2009 that ‘to everything that is related to missile defence our attitude is negative’. The impact of Makarov’s comments was, however, limited by the fact that both President Dmitry Medvedev and Prime Minister Vladimir Putin expressed satisfaction with the decision [to cancel the previous plan to construct a missile defence shield in the Czech Republic and Poland]. Medvedev stated that Russia was ready for ‘further dialogue’.¹⁵⁶ Since late September neither President Medvedev nor Prime Minister Putin has expressed an opinion on the issue of missile defence. However, open sources noted that the position of Moscow towards the revised missile defence plan of President Obama has changed for the worse. For further information, see the sub-Section: The First Signs of Tensions in Russian-American Relations.

Lieutenant Commander Juha-Antero Puistola from the Finnish Armed Forces’ National Defence College’s Department of Strategic and Defence Studies, noted that from Russia’s point of view, the use of the Baltic Sea as part of the proposed new US missile defence strategy could be a lesser evil than having a permanent missile base in Poland. He added that ‘It would not mean that the Aegis warships would be anchored permanently in the Baltic Sea, but rather it is more likely that the Aegis warships would only be deployed to the Baltic Sea in the event of a missile threat.’¹⁵⁷ The author disagrees with Puistola’s observation. From Russia’s point of view even potential deployment of Aegis warships to the Baltic Sea would be perceived as an anathema by the Russian officials in general and the military in particular. It can be foreseen that the potential deployment of the Aegis to the Baltic Sea would be dealt with in the same way as in the previous case of the proposed missile defence shield positioned in the Czech Republic and in Poland. Namely, the case will be rejected.

Furthermore, Russian officials might say that first and foremost the potential deployment to the Baltic Sea should not be considered.¹⁵⁸ The Russian officials would, however, disagree with the author's point of view about this.

The First Signs of Tensions in Russian-American Relations

Russia's sense of apprehension and suspicion was reinforced on 9 October 2009. It was on that day that the first signs of tensions in Russian-American relations appeared on the Russian horizon. Alexander Vershbow, Assistant Secretary of Defense for International Security, said that Russia's initial enthusiasm relating to the cancellation of the missile defence shield in the Czech Republic and Poland began to dissipate. 'I think that the Russian euphoria is [gradually] fading away.' He added that the Russian officials realised that the new project of American missile defence included the deployment of an even larger number of missiles and ships close to the Russian border. That same day Sergei Lavrov, Russian Minister of Foreign Affairs, said that during the forthcoming visit of Hillary Clinton, US Secretary of State, Moscow planned to receive American explanations in order to 'better understand the configuration of a new missile defence architecture that replaces the former proposal of construction of the missile defence shield in the Czech Republic and Poland'. So far, Moscow has not figured out exactly what this new American strategy entails. To complicate the situation further, Vershbow added Ukraine to the list of possible early-warning radar sites. Another point of contention is related to the delivery of the Patriot system to Poland as compensation for the cancellation of the missile defence shield there. On 8 October the same daily *Kommersant* reported that Moscow stated unequivocally that plans for delivering Patriot systems to Poland remained a bilateral issue between Poland and the US.¹⁵⁹ In the meantime, Moscow had changed its mind on the issue of Patriot missiles and had raised its concerns. On 12 October *Nezavisimaya Gazeta* reiterated a report published the same day in *Kommersant* and raised a question relating to statements made by Secretary of Defense Robert Gates and President Obama regarding the new architecture of missile defence and their implications for Russia. The author of the article concluded that 'Russia should remain calm and not react nervously to various statements originated in Washington'. He also suggested that 'Russia should maintain its military capabilities on a minimal but sufficient level and avoid getting involved in the arms race'.¹⁶⁰ It can be said that various statements originating from Washington shortly after President Obama cancelled the missile defence project; it was still confusing and unclear to officials in Moscow. Thus, it is not

surprising that the reaction so far coming from Moscow has been muted, cautious and apprehensive.

On 13 October Hillary Clinton visited Moscow where she met Sergei Lavrov and the two diplomats discussed possible co-operation on missile defence. Although Russia has welcomed Obama's new approach, it has reiterated that it was eager for more detailed information. Clinton said that the US would be as transparent as possible. She added 'We want to ensure that every question that the Russian military or Russian government asks is answered.'¹⁶¹ The reaction from Moscow can be summed up as follows: the US lacks clarity regarding missile defence. Hillary Clinton has not provided details on the 'configuration' of the missile defence constructed by the US. Sergei Lavrov restated Moscow's position – What is the exact nature of the plans relating to missile defence as viewed by the Department of Defense (DoD)? In other words, 'How in concrete terms would a new concept be developed?' With regards to the American reaction to Russia and the United States using Gabala (in Azerbaijan) and Armavir (in Russia's south) early-warning radar sites it was stated that 'the United States are currently studying the proposal'.¹⁶² On 15 October Sergei Ryabkov, Russia's Deputy Minister of Foreign Affairs, said that Russia is concerned about the discussions on missile defence between US officials and non-NATO members such as Ukraine. Ryabkov added, 'To say that we are encouraged about the information we are getting about contacts on this subject would be, to put it mildly, exaggeration'.¹⁶³ In the same interview with *Vremya Novostei*, Ryabkov further said that Russia does not see eye-to-eye with the United States on the ultimate purpose of missile defence, which Washington says is needed as a protection from the threat of missile strikes from Iran. 'We cannot come together with the United States on how real the need for missile defence methods will be after number of years.'¹⁶⁴

To put it mildly, the Russian strategy of stalling for time and asking for repeated clarifications may put the revised US missile defence project in jeopardy. The Russian officials are known to be first-rate diplomatic actors when it comes to stalling for time. This point of view should be remembered in Washington and not dismissed out of hand. The Russians may also use another stratagem. On 29 November 2008 President Dmitry Medvedev announced his pet project called the "Draft Treaty on European Security Architecture". The draft is centred on the proposition for setting a mechanism (consultations and conferences) that would address the problem of inner-state conflicts escalating to wars. The hidden context of the draft treaty, however, is that such actions, as for

instance, deployment of US missile defence – or indeed, NATO eastward expansion, are defined by Russia as threats to its security – and the proposed treaty would make it possible to block those by insisting on “threat perceptions” at consultations and conferences, where consensus is the rule.¹⁶⁵ Another view of Russia’s reaction to the American proposal was clearly elaborated in an article published in *Gazeta* online. Even after Hillary Clinton’s visit to Moscow, the results of the expert negotiations on missile defence and a follow up of a new agreement limiting Russian-American nuclear arsenals remain unclear. Negotiations aimed at replacing or renewing the 1991 Strategic Arms Reduction Treaty (START). At the same time, Clinton said that ‘As is in the US government so also in the Russian government there are people who are stuck [mentally] in the past. They don’t believe that the United States and Russia can co-operate closely. They distrust each other. We need to prove that they are wrong.’ In Clinton’s opinion the US and Russia will achieve positive results if ‘some time in the future they will announce about mutual plans in missile defence’. The key words in Clinton’s speech were, however, ‘shared values’.

It is impossible to construct a mutually agreed military system that is based on maximum coordination and maximum mutual trust without having shared values. Thus far, Russia and the United States have tried to defend totally different state systems and, what is sadder, contradictory values. Furthermore, it is impossible to construct a mutual military system with a state (such as the United States) that is considered to be an enemy at the same time as constantly using such an enemy as an explanation for your domestic problems such as a financial crisis or justification for your imperial wishes or desires. Obama’s cancellation of the missile defence in the Czech Republic and Poland and a new plan to construct such architecture on the sea-based Aegis warships raised an overblown feeling of pride among the Russian elite. In other words, the United States gave up its missile defence project under [constant] pressure from Moscow. Therefore, if one day in the future we see a joint Russian-American missile defence system this will be not because of a change, or thaw in relations between the two countries, but because of a thaw in global political relations on a world scale. Then, it will be a different Russia that is responsible (*for its deeds*, author’s comments) and wise (*to know what not to do*, author’s comments) and does not transmit its imperial desires to the world.¹⁶⁶ We may need to wait a long time for such a scenario to occur. Apparently the current political duo in Moscow of President Medvedev and Prime Minister Putin don’t aspire to such a vision and certainly don’t share the same values as their American counterparts. There is also no

guarantee that the Russian-American missile defence system will come to fruition under current circumstances. What we are likely to see is a continuation of dialogue between Russia and the US on missile defence accompanied by the Russian officials’ requests to know more and specific details of the revised missile defence architecture.

5.b.) Turkey’s Ambiguity

On the other hand, the reaction in Turkey towards President Barack Obama’s newly proposed missile defence remains very ambiguous. Speculation is building in Turkey over whether Ankara will play a part in a renewed US missile defence network, one designed mainly to counter Iran or Iranian missiles. Conjecture is being fuelled by two recent developments: the Obama administration’s decision to cancel the construction of an anti-missile shield in the Czech Republic and Poland, and Turkey’s own announcement that it intends to purchase its first missile defence system. Although it is not clear if Ankara’s plan to purchase a missile defence system is being coordinated with the United States, experts say the purchase is an indication that – despite warming relations between Turkey and Iran, and Turkish officials’ promotion of a diplomatic solution to the question of Iran’s nuclear programme – Turkey is not taking any chances regarding its neighbour’s intentions.¹⁶⁷ This information might have been correct up to the very recent visit of Prime Minister Recep Tayyip Erdogan to Tehran. Within a timeframe of twelve months the position of Turkey vis-à-vis Iran’s nuclear programme has undergone a substantial change. Namely, during the October 2008 visit of Murat Mercan, chairman of the ruling Justice and Development Party (known by its Turkish acronym as *AKP* or *Adalet ve Kalkinma Partisi*) parliamentary foreign policy committee, to Israel the latter noted that Israel was not the only country that felt threatened by Iran’s nuclear plans. ‘Iran is first and foremost a threat to us.’¹⁶⁸ However, on 26 October 2009 in an interview with the British daily paper, *The Guardian*, Prime Minister Recep Tayyip Erdogan said that Iran was a ‘friend’ and that Western powers were treating Iran unfairly over its nuclear programme.¹⁶⁹ Finally, Turkey’s foreign policy clearly articulated by Ahmet Davutoglu, Minister of Foreign Affairs, and known as ‘zero problems with neighbours’ takes into consideration the sensitive issue of Iran’s missile and nuclear programme and Turkey’s robust economic, political and diplomatic relations with Iran. As a result, Turkey’s position remains ambiguous - it is currently torn between the potential interest in joining President Obama’s project within the framework of the NATO Alliance but at the same time it does not wish to

upset the equilibrium in relations with Tehran that have flourished in the last eight years.¹⁷⁰ Thus, the position of Turkey can be summed up as looking to the West but standing with its 'exposed' back to the East, namely to Iran, Iraq and Syria. First and foremost the 'exposed back' should be taken care of.

It should also be clearly remembered that Turkey's intention to purchase its first missile defence system was published in the open press as long ago as March 2007 (see note 169) and therefore it would be wrong to link it to a recent initiative about missile defence proposed by President Barack Obama.¹⁷¹ In addition, the Patriot system and revised missile defence system are not related and each system has its own function. Finally, it is very difficult to assess the position and reaction of the Turkish security establishment in general and of the military in particular on President Obama's missile defence because the military are tight-lipped. In part this is because of the way that the military operates, namely keeping mum and in part it is because of implicit pressure from the government on the military not to eschew its position on such a delicate issue for Turkey as Iran.¹⁷² In a recently published article it was, however, noted that it seems that in Turkey there is some disagreement over the significance of an Iran with nuclear weapons: the military and secular elites are *worried* (author's italics) by Iran's nuclear policies, whereas the leaders of the Justice and Development Party and new elite groups do not share these concerns.¹⁷³ The wording 'worried' was not elaborated on further. There is no sense in speculating about what the article implied.

Although Turkish officials to date have kept their distance from American plans to introduce a more fluid European-based missile defence plan, experts say that Ankara could benefit by being involved. Lieutenant Colonel Marcel de Haas, a senior researcher at the Netherlands Institute of International Affairs, noted that 'The whole missile defence plan is going on, but in a different version, and it gets more

interesting now with countries such as Turkey possibly [getting] involved. It seems like the scope of the system is being increased.' He added that 'the question is if [placing Patriot missiles in Turkey is] going to be part of a theatre missile defence (TMD)' 'If that is the case for Turkey – in this whole expanded scheme of missile defence – it is quite interesting. I say that it strengthens the position of Turkey in NATO, and you can also consider it to be part of European defence, which could possibly bring Turkey closer to the EU.' Other observers have suggested that placing Patriots in Turkey could bolster Turkish-US relations, which have gone through several strained periods in recent years. Soner Cagaptay, senior fellow and director of the Turkish Research Programme at the Washington Institute for Near East Policy, said that 'Poland's loss may be Turkey's and America's gain: Turkey is the only NATO country that borders Iran, and US-Turkish co-operation on Tehran is key to Washington's success in tackling Iran's nuclearization.' Sami Kohen, a columnist with the daily *Milliyet* believes that, for now, Turkey is pursuing its own course regarding missile defence. He said that 'there is no linkage between this [the anti-missile system purchase] and the US shield project.'¹⁷⁴

On 7 October 2009 Ellen Tauscher, Under-secretary of State for Arms Control and International Security, told a panel at the Atlantic Council, a think-tank in Washington, that 'All of our NATO allies are invited to participate in a US-led missile defence shield programme, recently restructured by US President Barack Obama. So Turkey is certainly invited.' The new plan calls for the creation of a regional system in southeastern Europe, the Mediterranean and part of the Middle East. Tauscher added that unlike the former President George Bush plan, which aimed at protecting Western Europe and the United States, the Obama programme would defend Turkey and other allies in Turkey's region. Turkey has not yet decided whether to join the missile shield architecture.¹⁷⁵

6.) Conclusion

There is no doubt that Iran's missile and nuclear programme continue to vex Western governments who so far have not managed to dissuade Iran from giving it up. The secrecy of Iran's programme combined with Iran's persistency to pursue programme under any circumstances leaves very limited choices for the Western governments. The remaining choices left: ongoing dialogue; unrestricted and fully implemented sanctions with or without the blessing and/or participation of the People's Republic of China (PRC) and Russia as opposed to limited and not really economically biting sanctions as at the moment; acceptance of Iran

as emerging nuclear power and of the way that the West at large can live with Iran as a nuclear power; or - the last resort – the military option. The last two options remain controversial and thus far have been postponed until some time in the future.

President Barack Obama revised missile defence initiative to contain Iran or counter Iranian missiles is viewed by Moscow with suspicion and distrust. There is a deep-seated feeling in Moscow that there is basically no substantial difference between former President Bush's missile defence shield and the revised missile

defence initiative offered by President Obama. Sergei Ryabkov's statement that Russia does not see eye-to-eye with the United States on the ultimate purpose of missile defence supports the author's assertion. As a result, Moscow's reaction remains cautious and apprehensive. Moscow is asking for time to study Obama's initiative and is thus ultimately dragging the whole missile defence project. By raising their concerns, Russian officials are legitimately using the tools at their disposal to stymie President Obama's missile defence initiative. However, Russian officials would disagree with the author's point of view.

On the other hand, the reaction coming from Ankara is not just cautious but also very slow. The government of Turkey wishes to remain sitting on the fence between the United States and Iran and continue deliberating on its choices or options and solutions as it did in the past. Namely, by sipping endless slow cups of tea and looking around for the other actor's reactions. US pressure on Turkey will be counter-productive. The previous case of trying to bring Turkey in to fight on the side of the United States against the Iraq of Saddam Hussein was a clear example of what should not be done. Therefore, the United States should neither be disappointed nor surprised if its ally and NATO member remains sitting on the fence. The era of

President Turgut Ozal is long over and the relations between the two countries are no longer the same as they were in the past. We need to be as realistic as possible and not delude ourselves about the position of Turkey and the chances of the United States changing Turkey's position.

In Europe, nobody seems to have understood the impact of Obama's decision on missile defence. While Bush was willing to unilaterally invest into the defence of Europe, Obama does not. The new missile-defence deployment plan will make the defence of Europe much more difficult as it relies on missiles yet to be developed. The new plan seems to focus on regional allies, who would probably be more important to achieve immediate U.S. foreign policy goals – especially counterbalancing Iran after an American withdrawal from Iraq. It is highly likely that the Obama-administration will come back to Europe on missile defence either to co-finance mobile assets in Europe or to co-develop more advanced systems based on the SM-3. For both cases, European leaders are not prepared as the public debate on missile-defence at home was dominated by anti-Americanism, anti-Bushism or Russian propaganda (at best). Finally, a new kind of discussion within Europe, about the future of the defence of Europe in all dimensions seems to be needed.

Notes:

- ¹ To mention just few, see for instance, Judith Yaphe and Charles Lutes, "Reassessing the implications of a nuclear-armed Iran", *McNair Paper* no. 69 (August 2005); pp. 1-84; Efraim Inbar, "The need to block a nuclear Iran", *Middle East Review of International Affairs* (MERIA), vol. 10, no. 1 (March 2006) online <http://meria.idc.ac.il/journal/2006/issue1/inbar.pdf>; pp. 85-104; Dingli Shen, "Iran's nuclear ambitions test China's wisdom", *The Washington Quarterly*, vol. 29, no. 2 (Spring 2006); pp. 55-66; Eugene Kogan, "Israeli perceptions of the Iranian issue", Conflict Studies Research Centre (CSRC), Middle East Series 06/42 (September 2006) online: <http://www.da.mod.uk/colleges/arag/document-listings/middle-east>; Yossi Mekelberg, "Israel and Iran: From war of words to words of war?", *Middle East Programme Briefing Paper* (MEP BP), (March 2007) online: <http://www.chathamhouse.org.uk/publications/papers/view/-/id/462>; Mark Smith, "Russian perceptions on the Iranian nuclear issue", CSRC, Middle East Series 07/33 (October 2007) online <http://www.da.mod.uk/colleges/arag/document-listings/middle-east>; Ephraim Kam (ed.), "Israel and a nuclear Iran: Implications for arms control, deterrence, and defense", *Institute for National Security Studies* (INSS), Memorandum no. 94 (July 2008) online [http://www.inss.org.il/upload\(FILE\)1216203568.pdf](http://www.inss.org.il/upload(FILE)1216203568.pdf); Mark Fitzpatrick, "The Iranian nuclear crisis: Avoiding worst-case outcomes", *International Institute for Strategic Studies* (IISS), *Adelphi Paper* no. 398 (November 2008); pp. 1-99. Hereafter cited as Mark Fitzpatrick, "The Iranian nuclear crisis". Anthony Cordesman and Adam Seitz, "Iran Status Report - Iran and the challenges to US policy" in *Center for Strategic and International Studies* (CSIS), (11 August 2009) online http://www.csis.org/files/publications/090812_iranbrief.pdf; pp. 1-132. Hereafter cited as Anthony Cordesman and Adam Seitz, "Iran Status Report".
- ² "Iran: Nuclear intentions and capabilities". *National Intelligence Estimate* (November 2007) online http://www.dni.gov/press_releases/20071203_release.pdf. Since June 2005 when Mahmoud Ahmadinejad won a surprise victory over Hashemi Rafsanjani in the presidential election, the outgoing Mohammad Khatami government decided to end the suspension of the enrichment programme. Since then, Iranian officials have insisted that suspension is non-negotiable because enrichment is the 'national will'. Having created this national will, the leadership insists that it cannot now change it. Notwithstanding the circular logic of this position, there is no doubting the broad support in Iran for the enrichment goal. Mark Fitzpatrick, "The Iranian nuclear crisis"; p. 26. Ilan Berman in his recent piece has gone further than just stating that it is the 'national will', but Iranian officials view their nuclear programme as an 'inalienable' right. For a complete article, see <http://www.defensenews.com/story.php?i=4354239> – online on 2 November 2009. 81% of Iranians polled in February-March 2008 survey considered the enrichment programme 'very important' for Iran to have a full nuclear fuel cycle. "The Iranian nuclear crisis"; p. 64. Michael Hagen, Director of Central Intelligence Agency (CIA) said in September 2008 that subsequent intelligence going up to mid-2007 supported the conclusion of the NIE report that Iran had not restarted the weapons programme in that period. *Ibid*; p. 55. As long ago as December 2007, Ephraim Kam and Ephraim Asculai noted that Israel will try to argue that the NIE was not well founded. This will not be easy, because it is safe to assume that the database available to the American and Israeli intelligence communities is similar and that the difference lies in interpretation. However, it is also necessary to remember that intelligence assessments *can be wrong and can change course again* (author's italics). For a complete article, see "American intelligence reappraises the Iranian nuclear issue" in *INSS Insight* no. 39 (12 December 2007) online <http://www.inss.org.il/publications.php?cat=21&incat=&read=14>. On the other hand, the British intelligence said that Iran's nuclear programme was restarted in between 2004 and 2005. *Aviation Week and Space Technology*, 5 October 2009; p. 33.
- ³ "Understanding the key judgements in the new NIE on Iranian nuclear weapons" in *Center for Strategic and International Studies*, (4 December 2007) online http://csis.org/files/media/csis/pubs/071206_irannuclearnieanalysis.pdf.
- ⁴ Mark Fitzpatrick, "The Iranian nuclear crisis"; pp. 16-17. Furthermore, restrictions put on Iran's nuclear programme would be neither accepted nor rejected, but would effectively be shunted aside through non-responsive counter-proposals and endless negotiation and filibuster. *Ibid*; p. 61. See also *Jane's Defence Weekly*, 7 October 2009; p. 5.
- ⁵ Mark Fitzpatrick, "The Iranian nuclear crisis"; p. 13 and p. 17.
- ⁶ *Ibid*; p. 44. As of the end of May 2009, Iran had over 7000 centrifuges enriching uranium or under vacuum and ready to enrich, and had produced over 1300 kg of low enriched hexafluoride. Anthony Cordesman and Adam Seitz, "Iran Status Report"; p. 86. International Atomic Energy Agency (IAEA) inspectors found that Iran since August 2009 slightly raised the total number of centrifuges to 8692. <http://www.haaretz.com/hasen/spages/1128548.html> - online on 16 November 2009.
- ⁷ Mark Fitzpatrick, "The Iranian nuclear crisis"; pp. 44-45.
- ⁸ *Ibid*; pp. 52-53.
- ⁹ *Ibid*; pp. 53-54.
- ¹⁰ Anthony Cordesman and Adam Seitz, "Iran Status Report"; p. 79. For further information about 'laptop' and 'Green Salt', see *Ibid*; p. 89. For Uzi Rubin, former head of Israel Missile Defence Organisation (IMDO), the statement related to Iran's space programme, namely that 'I was impressed by the space launcher, especially its design' and 'It was an audacious achievement for a starting country, see <http://www.iranwatch.org/ourpubs/roundtables/interview-rubin-091709.html> - online on 17 September 2009.
- ¹¹ Anthony Cordesman and Adam Seitz, "Iran Status Report"; p. 87.
- ¹² *Ibid*; p. 97.
- ¹³ Bharath Gopalaswamy, "Iran missile program", *BASIC Getting to Zero Papers* no. 4 (15 July 2008) online <http://www.basicint.org/gtz/gtz04.pdf>. Hereafter cited as Bharath Gopalaswamy, "Iran missile".

- ¹⁴ For a complete article, see *Ibid.* For the steady development of Iran's missiles programme (from 1988 to the present), see http://www.nti.org/e_research/profiles/Iran/Missile/index.html. See also Greg Bruno, "Iran's ballistic missile program" in *Council on Foreign Relations* (CFR) online <http://www.cfr.org/publication/20425> - online on 15 October 2009. Hereafter cited as Greg Bruno, "Iran's ballistic".
- ¹⁵ http://www.nti.org/e_research/profiles/Iran/Missile/index.html. A second Kavoshgar research flight, involving a two-stage solid-fuel rocket, was launched in December 2008. Iran plans to launch a third Kavoshgar research rocket into space by the end of March 2010. *Space News*, 12 October 2009; p. 3. The Nuclear Threat Initiative (NTI) statement that the latest tests do not reveal any new capability beyond what has already been seen was reiterated by Uzi Rubin, former head of IMDO, who said that 'It does not appear that there has been any significant change in Iran's missile capabilities.' See *Jane's Defence Weekly*, 7 October 2009; p. 5. According to Theodore Postol, an expert on Iranian missile systems at the MIT, while development of an allegedly new multi-staged solid-fuel missile, the Sajjil advances the Iranian missile programme, 'It does not mark an immediate or dramatic shift in the nature of the potential missile threat from Iran.' "Technical addendum to the joint threat assessment of the Iran's nuclear and missile potential. The Sejil ballistic missile" online http://docs.ewi.info/JTA_TA_Sejil.pdf - online on 31 May 2009. For further assessment of the Sajjil missile, see Georg Mader, "Assessing the Iranian missile threat" in *Military Technology* (November 2009); pp. 36-37. According to Major General Vladimir Dvorkin, former director of the 4th Research Institute of the Russian Ministry of Defence (MoD), Iran already has missiles capable of reaching over 3000 km. He added that 'If the upper stage of the rocket launcher that took the first satellite into space is re-equipped, the range could be increased up to 4000 km.' http://en.rian.ru/military_news/20090921/156207542.html.
- ¹⁶ <http://www.iranwatch.org/ourpubs/roundtables/interview-rubin-091709.html> - online on 17 September 2009. For the technological breakthrough, see note 17.
- ¹⁷ "Iranian missile and outer space programs: Assessing present and future capabilities" in *Washington Institute for Near East Policy* online <http://washingtoninstitute.org/html/pdf/rubin20091102.pdf>; p. 27. Hereafter cited as Uzi Rubin, "Iranian missile". For comparison of a stark and different assessments re: Sajjil missile, see Uzi Rubin, "Iranian missile"; p. 21 and p. 27. For a complete report, see Uzi Rubin, "Iranian missile".
- ¹⁸ See: Klaus Faupel, Dimensionen der Souveränität, in: Michael Take (Hg.), *Politik als Wissenschaft*, Berlin, 2006, p.188;
- ¹⁹ See: Gustav C. Gressel, *Europäische Ostasienpolitik auf dem Prüfstand, Eine Evaluierung in den Problemfeldern der großen Politik*, Salzburg, 2007, p. 27ff;
- ²⁰ US-Raketenabwehr: Merkel warnt vor „Spaltung Europas“, *Die Presse Online*, 21. März 2007; Wenn die Raketenabwehr zur Glaubensfrage wird, *Die Presse Online*, 26. März 2007; Die neue Runde im Raketenwettbewerb, *Die Presse Online*, 04. April 2007;
- ²¹ For a good comment on this debate (unfortunately in German) see: Klaus Becher, *Ziel und Zweck der U.S.-Raketenabwehr und die europäische Interessenslage*, in: Sozialwissenschaftliche Schriftenreihe des IILP, Vienna, December 2007, 3-17, p.3;
- ²² See: Alexander Simon, *The Patriot Missile, Performance in the Gulf War Reviewed*, 15th July 1996, www.cdi.org/issues/bmd/patriot.html; Peter Sequard-Base, *Raketenabwehr, Bedrohung - Verteidigung, Eine physikalisch-technische Annäherung*, Studien und Berichte zur Sicherheitspolitik, 1/2003, Vienna, p. 31ff;
- ²³ David S. Yost, *Missile Defence on NATO's Agenda*, www.nato.int/docu/review/2006/issue3/english/analysis1.html; Holger H. Mey, *Raketenabwehr – Einige grundlegende Gedanken zu einer Idee, deren Zeit gekommen ist*, in: Erich Reiter, Ernst M. Felberbauer (Ed.), *Perspektiven einer europäischen Raketenabwehr*, Studien und Berichte zur Sicherheitspolitik, 2/2002, Vienna, p. 15-22;
- ²⁴ See: Martin Agüera, *Amerikas Raketenabwehrpläne nach dem 11. September: Rolle und Optionen für Europa?*, In: Erich Reiter, Ernst M. Felberbauer (Eds.), *Perspektiven einer europäischen Raketenabwehr*, Studien und Berichte zur Sicherheitspolitik, 2/2002, Vienna, 61-88, p. 64-65;
- ²⁵ See about the Missile and the test: Joseph S. Bermudez, *A History of Ballistic Missile Development in the DPRK*, Monterey Institute of International Studies, Monitoring Proliferation Threats Studies, Occasional Paper Nr. 2, download at: <http://cns.miis.edu/pubs/opapers/op2/op2.pdf>, p.26ff;
- ²⁶ See: *Raketenabwehr in Europa – die Diskussion in den USA, Tschechien, Polen und Russland*, Diskussionspapier, Konrad-Adenauer-Stiftung, www.kas.de/db_files/dokumente/7_dokumente_dok_pdf_1177_1.pdf, p.3-4;
- ²⁷ When launched at a programme-angle of 40°; data from Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, Schriftenreihe des Amtes für Rüstung und Wehrtechnik, Vienna, 2009, p.31;
- ²⁸ For the data of the missiles and their interception see: Peter Sequard-Base, *Raketenabwehr, Bedrohung - Verteidigung*;
- ²⁹ Still, the Nodong is very instable during its final propelled flight-phase, due to shifts in the centre of gravity (exhaustion of the liquid fuel) and poor stabilisation. See: Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, p.30-32; Problems with stability have emerged in all scaled up SCUD-model-like Missiles, from Iraq's single-stage, integral Al Hussein to North Korea's three-staged Taepo-Dong 1 and 2 satellite launch vehicles; See also: Joseph S. Bermudez, *A History of Ballistic Missile Development in the DPRK*; Peter Sequard-Base, *Raketenabwehr, Bedrohung – Verteidigung*;
- ³⁰ National Missile Defence Act of 1999, <http://thomas.loc.gov/cgi-bin/query/z?c106:S.296>;

- 31 The full text of the ABM-Treaty is available at: www.state.gov/www/global/arms/treaties/abm/abm2.html
- 32 The International Institute for Strategic Studies, *The Military Balance 2002-2003*, Oxford, p.245;
- 33 America withdraws from ABM-Treaty, BBC-News Online, 13. December 2001. Interestingly, at that day, Putin stated: "I fully believe that the decision taken by the president of the United States does not pose a threat to the national security of the Russian Federation." *ibid*;
- 34 For the assessment of the strategic situation of the time see: *Big Bang: 11 September and US Non-proliferation Policy*, in: The International Institute for Strategic Studies, *Strategic Survey 2001/2002*, Oxford, p.17-35;
- 35 The missile defence architecture at the time did not mention any installations in Europe or on the U.S. East Coast. The defensive systems heading westward were ordered to be operational by 2004. North Korea was the only nation that was explicitly mentioned as a threat. However, the State Department was ordered to negotiate within NATO for a possible cooperation of European allies within the missile-defence architecture. See: The White House, Washington, *National Security Presidential Directive /NSPD-23*, December 16, 2006, www.fas.org/irp/offdocs/nspd-23.htm; A short overview may be provided by: Missile Defense Agency, *The Missile Defence Programme 2009-2010*, August 2009, Washington D.C.; or: Missile Defense Agency, *Global Ballistic Missile Defense, A Layered Integrated Defense, BMDs Booklet*, fourth edition, Washington D.C., 2006. Unfortunately, the MDA's publications are very superficial, rather serving as a nice picture book than as informative papers.
- 36 Missile Defense Agency, *Elements, Ground-Based, Midcourse Defense (GMD)*, www.mda.mil/system/gmd.html;
- 37 For the technical description of the missile see: Duncan Lennox, *Jane's Strategic Weapons Systems*, Issue Fourty-nine, Couldon, Surrey, 2008, p.333-337; For the performance of the system against ballistic missiles see: Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Rakettenabwehr*, p.31-34;
- 38 Die US-Rakettenabwehr vorzeitig bereit, Beginn der Stationierung während des Sommers, Neue Zürcher Zeitung Online, 3. February 2004;
- 39 Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.338-339;
- 40 Unfortunately, the critical importance of the SBRIS-satellites is not mentioned in Sequard-Base's recent publication (Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Rakettenabwehr*). As Dr. Sequard-Base was the author's teacher in Missile Technology at the Austrian armed Forces Air Defence School in 2001, the author attended many presentations about the preliminary results of the RAAB-missile defence simulation programme, in which the role of the satellites was discussed. Note that all simulations and scenarios in his recent publication are based on the assumption that SBRIS-low and high are operational and may provide data-link to the interceptors!
- 41 Missile Defense Agency, *Fact Sheet, Space Tracking and Surveillance System*, www.mda.mil/global/documents/pdf/stss.pdf;
- 42 Missile Defense Agency, *Fact Sheet, Upgraded Early Warning Radars (UEWR)*, www.mda.mil/global/documents/pdf/uewr1.pdf;
- 43 Missile Defense Agency, *Fact Sheet, Sea-based X-band Radar*, www.mda.mil/global/documents/pdf/sbx.pdf;
- 44 Missile Defense Agency, *Fact Sheet, Army Navy/ Transportable Radar Surveillance (AN/TPY-2)*, www.mda.mil/global/documents/pdf/an_tpy2.pdf;
- 45 The Chinese made DF-5 is a rather simple, first-generation three-staged, liquid fuelled ICBM, carrying a single warhead. Therefore a missile based on the DF-5 was used by the MoD's computer-simulations as a "red" missile to be launched by Iran. This does not imply however, that China would proliferate DF-5s to the Middle East. But if any Middle-Eastern country would develop a ballistic missile on basics of black-market acquired Russian technology and some indigenous research-work, it would probably come up with something very similar to the DF-5. For data see: Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Rakettenabwehr*, p.78-81;
- 46 See: The International Institute for Strategic Studies, *Strategic Survey 2001/2002*, p.28-35;
- 47 *Ibid.*, p.34;
- 48 For this line of argumentation see: Keith B. Payne, *Bush Administration Strategic Policy: A Reality Check*, *The Journal of Strategic Studies*, Vol.28, No.5, October 2005, p.775-787;
- 49 The International Institute for Strategic Studies, *Strategic Survey 2003/4*, An Evaluation and Forecast of World Affairs, Oxford, p.157-161;
- 50 The International Institute for Strategic Studies, *Strategic Survey 2006*, The IISS Annual Review of World affairs, London, p.197-210; See also: Ahmed S. Hashim, *Iraq's Sunni Insurgency*, Adelphi-Paper 402, London, 2009;
- 51 Also see: Mark Fitzpatrick, *The Iranian Nuclear Crisis, Avoiding worst-case outcomes*, Adelphi Paper No.398, Oxon, 2008;
- 52 See: Ali M. Ansari, *Iran under Achmedinejad, the politics of confrontation*, Adelphi Paper No.393, Oxon, 2007, p.41-65;
- 53 Blair verdächtigt Iran, Neue Zürcher Zeitung Online, 06. Oktober 2005;

- ⁵⁴ Iran verlangt Freilassung, Neue Zürcher Zeitung Online, 14. Jänner 2007; U.S. says arms link Iranians to Iraqi Shiites, International Herald Tribune Online, 11 February 2007; U.S. links Iran to raid that killed GIs in Iraq, International Herald Tribune Online, 2 July 2007;
- ⁵⁵ Ali M. Ansari, *Iran under Achmedinejad*, p.61;
- ⁵⁶ Ibid., p.59-60;
- ⁵⁷ Ende der Gewalt gefordert, Maliki fordert Unterstützung für irakische Regierung – Anschlag überschattet Gipfel, Neue Zürcher Zeitung Online, 10. März, 2007; Die USA und Iran im Gespräch über den Irak, Vorsichtige Annäherung an Bagdad, Neue Zürcher Zeitung Online, 28. Mai 2007;
- ⁵⁸ See: The International Institute for Strategic Studies, *Strategic Survey 2007, The Annual Review of World Affairs*, Oxon, p.228ff;
- ⁵⁹ Ibid.: p. 229;
- ⁶⁰ Ali M. Ansari, *Iran under Achmedinejad*, p.64-65;
- ⁶¹ The International Institute for Strategic Studies, *Strategic Survey 2007*, p.239-241;
- ⁶² In Yemen, War Centers on Authority, Not Terrain, International Herald Tribune, 24 October 2009; Sahar Zubari, Yemen: Another Proxy War, Foreign Policy Blogs Network, Iran, 12 November 2009;
- ⁶³ A Stronger Enemy? Afghan Insurgents' Improved Skills Could come from Outside Sources, Defense News, 8 June 2009, p.28;
- ⁶⁴ The International Institute for Strategic Studies, *Strategic Survey 2002/3, An Evaluation and Forecast of World Affairs*, Oxford, p.38-39;
- ⁶⁵ Polen will Basis für US-Raketenschild werden, Die Welt Online, 18.11.2005;
- ⁶⁶ NATO Endorses Europe Missile Shield, New York Times Online, 4 April 2008; EU verweigert Bush Hilfe bei Raketenabwehr, Financial Times Deutschland Online, 10. Juni 2008;
- ⁶⁷ See for a prominent example of European short-sightedness: "US-Raketenabwehr ist eine Provokation", Die Presse Online, 22. August 2007;
- ⁶⁸ Steinmeier warnt vor neuem Wettrüsten, Stern Online, 17. März 2007;
- ⁶⁹ Polen schachert um US-Raketenabwehr, Besseres Angebot gefordert, Neue Zürcher Zeitung Online, 10. Juli 2008; Neue Gespräche über geplante US-Raketenabwehr in Polen, Annäherung beider Seiten – Russland weiter skeptisch, Neue Zürcher Zeitung Online, 14. August 2008; Polen und Tschechien signalisieren Ja, Süddeutsche Zeitung Online, 19. Februar 2007;
- ⁷⁰ *Missile defence Reloaded, A Phased Adaptive Approach for Missile Defence in Europe*, Military Technology, 11/2009, 29-34, p.33;
- ⁷¹ Michael Colder, *Missile Defence, What the Obama Administration's Change of Policy Means for Europe and the United Kingdom*, in: RUSI Journal, October 2009, Vol.154, No.5, 14-19, p.17;
- ⁷² USA und Polen einig über Raketenabwehr, Vereinbarung sieht Stationierung von zehn Abfangraketen vor, Neue Zürcher Zeitung Online, 14. August 2008;
- ⁷³ US-Raketenabwehr: Litauen erneut als möglicher Standort für Abfangraketen bezeichnet, Novosti Online, 23. Juli 2008;
- ⁷⁴ This refers to the EU#S defence-clause, laid down in Article 42/7 of the Lisbon Treaty. See: <http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:2008:115:0013:0045:EN:PDF>;
- ⁷⁵ Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*. Unfortunately, there is only a German version of the paper.
- ⁷⁶ Generally in the literature Ustka is referred to the launching site, although the base would have been established closer to Redzikowo than to Ustka. As the distance Redzikowo-Ustka is below 20km, it does not really matter for the missiles. To avoid confusion, the author will refer to the launching-site by the name Ustka, as it is common elsewhere.
- ⁷⁷ Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, p.57;
- ⁷⁸ Ibid., p.59;
- ⁷⁹ Ibid., p.55-59;
- ⁸⁰ Pavel Podvig, *History and the Current Status of the Russian Early-Warning System*, Science and Global Security, 10:21–60, 2002, <http://iis-db.stanford.edu/pubs/20734/Podvig-S&GS.pdf>;
- ⁸¹ Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, p.49f. The 16,896 transmitting/receiving modules cited in Jane's Strategic Weapons Systems seem unlikely, as the 9,2m² THAAD-GBR Radar would contain about 25,000 of the same modules. Otherwise Jane's and Sequard-Base operate with equal or very similar data. Compare: Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.334;
- ⁸² Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, p. 59;
- ⁸³ See: Ibid., p.20-24;
- ⁸⁴ Ibid., p.60-65;

- 85 Ibid., p.61-62;
- 86 Missile Defence Agency, *Testing, Building Confidence*, <http://www.mda.mil/global/documents/pdf/2009mdabook.pdf>, p.25;
- 87 Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketendabwehr*, p.49;
- 88 Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p. 360;
- 89 Missile and System Data see: Ibid., p.333-337; Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketendabwehr*, p.31-34;
- 90 Ibid., p.32-34;
- 91 Interestingly, this advantage pays off especially if Russia would attack Europe, (ibid, p.88-92);
- 92 Ibid., p. 83-88;
- 93 Ibid., p.44-48;
- 94 Ibid., p. 80-81;
- 95 Ibid, p.73;
- 96 Ibid., p.86;
- 97 Ibid., p.83 and 84;
- 98 Ibid., p.86-87;
- 99 Schwenk der US-Regierung: Doch kein Raketenschild in Europa, Die Presse Online, 17.09.2009; Eastern Europe Awaits Decision on Missile Shield, New York Times Online, 17.09.2009;
- 100 U.S. Reboots Its BMD Plans, Defence News, 07.12.2009, p.10 and p.20; *Missile Defence Reloaded, A 'Phased, Adaptive Approach for Missile Defence in Europe*, Military Technology, 11/2009, p.31;
- 101 For the development and history of the Standard missile family see: Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.351-353;
- 102 Ibid., p.352;
- 103 Missile Defence Agency, *Testing, Building Confidence*, Washington D.C., 2009, p.7;
- 104 Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.354;
- 105 Ibid., p.355;
- 106 There are different figures about the weight of the Lightweight Exo-Atmospheric Projectile (LEAP): in Jane's the LEAP of the SM-3 Block I is cited with 23kg. (Ibid., p.355). Dr. Base calculated 5kg for the Block II version. (Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketendabwehr*, p. 36). Global Security rates the LEAP under 20kg, being unspecified about the actual weight of the warhead of the SM-3. <http://www.globalsecurity.org/space/systems/leap-n.htm>; It is not clear, where this different estimations come from, however for the purpose of achieving a high burnout speed and range with a very small missile weight has to be reduced as much as possible.
- 107 Missile Defence Agency, *Fact Sheet, Aegis Ballistic Missile Defence Testing*, http://www.mda.mil/global/documents/pdf/aegis_tests.pdf;
- 108 Directory of U.S. Military Rockets and Missiles, RIM-161, <http://www.designation-systems.net/dusrm/m-161.html>;
- 109 *Missile Defence Reloaded, A "Phased, Adaptive Approach" for Missile Defence in Europe*, Military Technology, 11/2009, p.34;
- 110 Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.355;
- 111 Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketendabwehr*, p. 36;
- 112 See for the canister: Lockheed Martin, The MK 41 Vertical Launching System (VLS), http://www.lockheedmartin.com/data/assets/ms2/pdf/MK41_VLS_factsheet.pdf;
- 113 The actual length of the two-staged version of the GBI is unknown. Otherwise see: Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.336;
- 114 Ibid., p. 355;
- 115 Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketendabwehr*, p. 59;
- 116 Ibid., p.96;
- 117 Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.360;
- 118 8W is the maximum output according to: Ibid., p.360. Sequard-Base mentioned 10W: Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketendabwehr*, p.51;
- 119 Ibid., p.30;
- 120 All of Sequard-Base's calculations are based on the assumptions that SBIRS-High and SBIRD-Low are operational. During previous simulations, Dr. Sequard-Base told the author, that without satellite-early warning by SIBRIS-high and tracking by SBRIS-low satellites, the whole system – referring to the 3rd Site –

will face great difficulties intercepting the incoming missiles – at least if the Brdy-radar is not fully equipped with all the modules.

- ¹²¹ Obama speech on missiles, Financial Times Online, 17.09.2009;
- ¹²² Ibid.;
- ¹²³ Robert M. Gates, A Better Missile Defense for a Safer Europe, New York Times Online, 19.09.2009;
- ¹²⁴ Ibid.;
- ¹²⁵ Ibid.;
- ¹²⁶ Ibid.;
- ¹²⁷ Ibid.;
- ¹²⁸ Mark Fitzpatrick, *A Prudent Decision on Missile Defence*, Survival, Vol.51, No. 6, December 2009, 5-12, p.5;
- ¹²⁹ U.S. Navy's BMD Fleet Plans Europe Defence, Questions Emerge on Crew Size, Deployment Length, Skipper's Launch Authority, Defence News, 28.09.2009, p.25;
- ¹³⁰ For ships characteristics and numbers see: naval-technology.com, Arleigh Burke Class, (Aegis) Guided Missile Destroyer, (USA); <http://www.naval-technology.com/projects/burke/>
- ¹³¹ U.S. Navy's BMD Fleet Plans Europe Defence, Questions Emerge on Crew Size, Deployment Length, Skipper's Launch Authority, Defence News, 28.09.2009, p.25;
- ¹³² „Der seegestützte Alternativeinsatz ist zu begrüßen, wenn sonst nichts verfügbar ist, jedoch erscheint die Lösung mit den geplanten Stellungen in Brdy und Ustka (GBI2) aus technischer Sicht definitiv besser zu sein.“ Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, p. 97; Translated by the author;
- ¹³³ Duncan Lennox, *Jane's Strategic Weapons Systems*, 2008, p.335;
- ¹³⁴ See the MDA's announcement: http://www.mda.mil/system/aegis_bmd.html
- ¹³⁵ The concept of denial and punitive deterrence was lent from Glenn Snyder. See: Glenn H. Snyder, *Deterrence and Defence, Toward a Theory of National Security*, Princeton University Press, 1961;
- ¹³⁶ Christian Rumpf, *Dardanelles, Sea of Marmara, Bosphorus*, in: Rudolf Bernhardt (Ed.), *Encyclopaedia of Public International Law*, Volume I, Amsterdam, a.o., 945-950, p.947-950; **Montreux Convention**. (2010). In *Encyclopædia Britannica*. Retrieved January 10, 2010, from Encyclopædia Britannica Online: <http://www.britannica.com/EBchecked/topic/1319887/Montreux-Convention>;
- ¹³⁷ Nile Gardiner, Barack Obama's Top Ten Foreign Policy Follies, Telegraph Online, 23.12.2009; Nile Gardiner, Barack Obama surrenders to Russia on Missile Defence, Telegraph Online, 17.09.2009; Obama's Roolie Blunder on Missile Defense Concessions, Heritage Foundation Online, 18.09.2009;
- ¹³⁸ See: Mark Fitzpatrick, *A Prudent Decision on Missile Defence*, p.9-11;
- ¹³⁹ David Smith, Obama Missile Defence Blunder, Defense News, 28.09.2009, p.37;
- ¹⁴⁰ Klaus Becher, *Ziel und Zweck der US-Raketenabwehr*, p. 3-17; Andrei V. Zagorski, *Die Kontroverse über amerikanische Raketenabwehr in Europa: Lösungsversuche in der Sackgasse?* Sozialwissenschaftliche Schriftenreihe des IILP, Vienna, December 2007, p. 18-24;
- ¹⁴¹ David Smith, *Obama Missile Defence Blunder*, Defense News, 28.09.2009, p.37;
- ¹⁴² Ibid., p.37;
- ¹⁴³ Russian president reacts to U.S. offer on Iran, International Herald Tribune Online, 3 March 2009; For the Russian-Iranian strategic relations and cooperation – including on nuclear technology and the Iranian military nuclear programme – see: Hannes Adomeit, *Russland und Iran, Welche Ziele und Interessen verfolgt Russland? Wie verlässlich ist Moskau, wenn es darum geht, Teherans Aufstieg zur Atommacht zu verhindern?* Sozialwissenschaftliche Schriftenreihe des IILP, November 2009, Vienna;
- ¹⁴⁴ For the different options on U.S. Grand Strategy see: Barry R. Posen, Andrew L. Ross, Competing Visions for U.S. Grand Strategy, in: *International Security*, Vol.21, No.3, Winter 1996/97, pp. 5-53;
- ¹⁴⁵ A consecutive paper will be published by the IILP by 2010 to address this problem. Preliminary title is: Gustav C. Gressel, Ready for the Rumble? Remarks on military strengths and capabilities of NATO Europe compared to Russia;
- ¹⁴⁶ Obama reaches out to Muslim World, BBC Online, 06. April 2009; Why is Obama Paying So Much Attention To Turkey, Radio Free Europe Online, 05. April 2009;
- ¹⁴⁷ Andrea K. Riemer, *Strategische und geopolitische Überlegungen der USA zur EU-Integration der Türkei*, in: Erich Reiter (Ed.), *Sicherheitspolitische und strategische Aspekte eines Beitritts der Türkei zur Europäischen Union*, Vienna, 2006, p. 83-104;
- ¹⁴⁸ Obama Urges Turkey to Join Missile Defense Effort, Defense News, 14 December 2009, p.23;
- ¹⁴⁹ Andrew Kuchins, "Pressing the Reset Button in US-Russian Relations" in *Center for Strategic and International Studies Critical Questions* online http://www.csis.org/files/media/isis/pubs/090304_cq_kuchins_russia.pdf. For a new assessment of the threat and the new missile defence plan, see Brad Glosserman, "Don't Forget Asia" in *Pacific Forum CSIS*, no. 62 (17 September 2009) online <http://www.csis.org/files/publication/pac0962.pdf>. See also

Strobe Talbott, "A Better Base for Cutting Nuclear Weapons" in *Brookings* online http://www.brookings.edu/opinions/2009/0921_nuclear_proliferation.

- ¹⁵⁰ Joseph Ferguson, "US-Russia relations: Laying the groundwork" in *Comparative Connections*, A quarterly e-journal of East Asian bilateral relations online http://www.csis.org/files/publication/0902qus_russia.pdf - online in July 2009.
- ¹⁵¹ <http://www.moscowtimes.ru/opinion/article/383727.html> - online on 22 September 2009. For a re-assessment of President Obama missile defence, see http://www.nti.org/e_research/e3_missile_defense.html - online on 9 October 2009.
- ¹⁵² http://www.redstar.ru/2009/10/06_10/3_01.html. Specifically, Moscow could contribute an early-warning radar system to the missile defence system. *Defense News*, 12 October 2009; p. 1 and p. 8. On 17 September 2009 Robert Gates, Secretary of Defense, restated the administration's desire for Russia to become US partner in a missile defence scheme for Europe. *Space News*, 28 September 2009; p. 10. A report in *RIA Novosti* cited Viktor Yesin, the now retired former Chief of Staff of the Russian Strategic Missile Forces, as stating that 'Russia and the US could jointly turn [to construction of missile defence] in the future if Iran gets such a weapon (namely, LRBM), but this would not happen until at least 2015.' In addition, Russia's Chief of the General Staff, Nikolai Makarov, indicated that co-operation on missile defence is something that they would be sympathetic to and that there would 'certainly' be opportunities for. http://www.nti.org/e_research/e3_missile_defense.html - online on 9 October 2009. For the negative attitude of the same General Makarov to missile defence, see note 156.
- ¹⁵³ <http://www.carnegie.ru/en/pubs/media/82900.htm> - online on 12 October 2009.
- ¹⁵⁴ <http://www.nytimes.com/2009/10/22/world/eu/rope/22biden.html>.
- ¹⁵⁵ <http://www.moscowtimes.ru/opinion/article/383727.html> - online on 22 September 2009. See also *Jane's Defence Weekly*, 21 October 2009; p. 21; <http://www.referl.org/articleprintview/1839430.html> - online on 29 September 2009. Major General Vladimir Dvorkin explains why the newly proposed missile defence poses a problem to Russia. For further explanation, see notes 156, 158 and 160. However, his earlier statement of 21 September 2009 contradicts his explanation made later. He said on the 21 September that the change in the US stance on missile defence in Europe was justified. He noted that 'We don't know what Iran is going to use.' http://en.rian.ru/military_news/20090921/156207542.html.
- ¹⁵⁶ http://www.nti.org/e_research/e3_missile_defense.html - online on 9 October 2009.
- ¹⁵⁷ *Defense News*, 5 October 2009; p. 46. Concerning the concentration of US forces, see notes 156 and 159.
- ¹⁵⁸ For support of the author's argument, see <http://www.referl.org/articleprintview/1839430.html> - online on 29 September 2009. Russia would be concerned if this new sea-based interceptors are based in Arctic waters, the North Sea, or the Baltic Sea, as this would imply that the trajectories of Russian ballistic missiles could be tracked. *Ibid.*
- ¹⁵⁹ <http://www.kommersant.ru/doc.aspx?DocsID=1254510> - online on 12 October 2009.
- ¹⁶⁰ http://www.ng.ru/politics/2009-10-12/3_kartbalnsh.html. Shortly after President Obama's cancellation of the missile defence system in the Czech Republic and Poland a further explanation followed from Washington and this explanation raised concerns in Moscow. Robert Gates said that despite cancellation 'We strengthened and not cancelled missile defence in Europe.' <http://www.kommersant.ru/doc.aspx?DocsID=1254510> - online on 12 October 2009. *Kommersant* has not, however, elaborated further on Robert Gates' statement and Gates' statement was cited again in *Izvestia* online (see below). According to Major General Vladimir Dvorkin, cancellation of deployment of missile shield in Central Europe does not mean that the United States ceased to work on missile defence. The Americans have achieved new technical/technological level. They developed a new, less expensive and effective plan to create global missile defence system (see note 151). This new plan poses a problem for Russia. In addition, there is also the assumption in Moscow that a new missile defence configuration might prove to be more dangerous than the previously planned missile defence in the Czech Republic and Poland. <http://www.izvestia.ru/politic/article3134136> - online on 13 October 2009. *Izvestia* has not, however, elaborated further on Dvorkin's assessment, namely why the American new architecture poses a problem and may prove to be more dangerous. The author can only suppose that the technical/technological level that the US military has achieved and perhaps the effective use of such a plan might be the reasons for Dvorkin's assumptions. For further explanation about potential dangers, see note 155 and http://www.redstar.ru/2009/10/17_10/3_02.html. In the recent issue of *Izvestia* it was also noted that by arguing with Washington about positioning of missile defence shield in the Czech Republic and Poland Moscow has ignored the fact that the United States actively pursued the SM-3 missile defence system based on the Aegis warships. For a complete article, see <http://www.izvestia.ru/world.article3134729> - online on 28 October 2009.
- ¹⁶¹ <http://www.jpost.com/servlet/Satellite?cid=1255204784899&pag> - online on 13 October 2009.
- ¹⁶² http://www.redstar.ru/2009/10/15_10/1_03.html. See also <http://www.izvestia.ru/news/news218426> - online on 16 October 2009. A very similar reaction was presented by Sergei Ryabkov, Russia's Deputy Minister of Foreign Affairs in an interview with a daily *Vremya Novosti*. See <http://www.defensenews.com/story.php?i=4349295&c=EUR&s=TOP> - online on 29 October 2009.
- ¹⁶³ For a complete article, see <http://www.izvestia.ru/news/news218347> - online on 15 October 2009. See also (note 159, for a complete article, see <http://www.gazeta.ru>).

- ¹⁶⁴ <http://www.defensenews.com/story.php?i=4349295&c=EUR&s=TOP> – online on 29 October 2009.
- ¹⁶⁵ For a complete article, see <http://www.izvestia.ru/politic/article3135935/> - online on 1 December 2009.
- ¹⁶⁶ For a complete article, see <http://www.gazeta.ru/column/novoprudsky/3273618.shtml> - online on 16 October 2009. As for doubts concerning Russian-American co-operation in missile defence, see note 153. For an outright rejection of such co-operation, see note 164.
- ¹⁶⁷ Yigal Schleifer, “*Turkey: Is Ankara set to become a vital player in revamped US anti-missile shield?*” in *Eurasia Insight* (25 September 2009) online <http://www.eurasianet.org/departments/insightb/articles/eav092509>. Hereafter cited as Yigal Schleifer, “*Turkey: Is Ankara?*” Regarding Ankara’s plan to purchase a missile defence system, see *Turkish Daily News*, 6 March 2007; *Military Technology*, 4 (2007); p. 126; *Today’s Zaman*, 24 April 2007; *Jane’s Defence Weekly*, 25 April 2007; p. 12; <http://www.turkishdailynews.com.tr/article.php?enewsid=98659> – online on 12 March 2008; *Defense News*, 28 April 2008; p. 31; <http://www.turkishdailynews.com.tr/article.php?enewsid=103060> – online on 29 April 2008; *Jane’s Defence Weekly*, 30 July 2008; p. 13; *Today’s Zaman*, 25 August 2008; Saban Kardas, “*Patriot missile procurement option sparks controversy in Turkey*” in *Eurasia Daily Monitor*, vol. 6, issue 170, (17 September 2009) online http://www.jamestown.org/programs/edm/single/?tx_ttnews%5Btt_news%5D=103060. Hereafter cited as Saban Kardas, “*Patriot missile*”. See also *Jane’s Defence Weekly*, 30 September 2009; p. 16; <http://www.hurriyetdailynews.com/n.php?n=turkish-air-defense-buy-not-related-to-us-missile-shield-2009-10-05>; <http://www.hurriyetdailynews.com/n.php?n=us-invites-turkey-to-join> – online on 8 October 2009.
- ¹⁶⁸ For a complete article, see <http://www.haaretz.com/hasen/spages/1045132.html> - online on 12 October 2008.
- ¹⁶⁹ <http://www.hurriyetdailynews.com/n.php?n=erdogan-west-treats-iran> – online on 26 October 2009. See also <http://www.nytimes.com/2009/10/28/world/europe/28turkey.html>; *Defense News*, 12 October 2009; p. 18. However, Iran’s recent brinkmanship over the nuclear issue has not only put Tehran on course for a head-on collision with the international community, but has also landed Ankara in a difficult diplomatic situation. Turkish Prime Minister Recep Tayyip Erdogan’s courting of Iranian President Mahmoud Ahmadinejad, along with Turkish Minister of Foreign Affairs Ahmet Davutoglu’s policy of “engagement through dialogue,” does not appear to have brought any moderating results on Tehran. For a complete article, see <http://www.hurriyetdailynews.com/n.php?n=turkey-in-a-difficult-position> - online on 3 December 2009.
- ¹⁷⁰ For Turkey’s daunting task to find the equilibrium between missile defence system and its relations with Iran, see Piotr Zalewski, “*Missile Defence: A view from Turkey*” in *Centre for European Policy Studies (CEPS) Commentary*, (12 October 2009) online <http://www.ceps.eu/book/missile-defence-view-turkey>. For an earlier article on the same issue, see Mehmet Ogutsu, “*Turkey: A major regional power to engage or confront Iran*” in *Insight Turkey*, vol. 9, no. 2 (April-June 2007); pp. 105-115.
- ¹⁷¹ For choices that Turkey faces, see Sebnem Udum, “*Missile proliferation in the Middle East: Turkey and missile defense*” in *Turkish Studies*, vol. 4, no. 3 (Autumn 2003); pp. 71-72.
- ¹⁷² Notes 11 to 14 published in the recent report by Henri Barkey are out-of-date and do not reflect the position of security establishment and of the military as of today, namely in December 2009. “*Turkey’s perspectives on nuclear weapons and disarmament*” in Stimson Nuclear Security Series, vol. VI (22 September 2009) online http://www.carnegieendowment.org/files/Nuclear_Turkey.pdf; p. 72. As recently as 6 August 2007 it was noted that some analysts in Ankara suggested that the powerful Turkish military was closer to the US position on Iran’s nuclear issue than Prime Minister Erdogan’s civilian government, but that it appreciated Iran’s co-operation against the Kurdistan Workers’ Party (known by its Turkish acronym as PKK or *Partiya Karkeren Kurdistan*). <http://www.defensenews.com/story.php?F=2941604&C=america> – online on 6 August 2007.
- ¹⁷³ Gallia Lindenstrauss and Oded Eran, “*Not just a bridge over troubled waters: Turkey and regional and international affairs*” in Shlomo Brom and Anat Kurz (eds.), *Strategic Survey for Israel 2009*. Tel Aviv: Institute for National Security Studies, 2009 online [http://www.inss.org.il/upload\(FILE\)1248343818.pdf](http://www.inss.org.il/upload(FILE)1248343818.pdf); p. 85.
- ¹⁷⁴ Yigal Schleifer, “*Turkey: Is Ankara?*” An article published in *Jane’s Defence Weekly* has not stated explicitly about the link, but has neither refuted opinion about the link, 30 September 2009; p. 16. According to Saban Kardas, the Turkish media maintains that Turkey wants Patriot missiles to defend itself against Iran and *links* (author’s italics) this decision to the US plans to build a missile shield. For a complete article, see “*Patriot missile*”. It can be said that there is insufficient evidence to speak about Turkey’s decision to purchase a missile defence system and a link to an American decision building a missile shield, however, there are plenty of speculations about a link.
- ¹⁷⁵ <http://www.hurriyetdailynews.com/n.php?n=us-invites-turkey-to-join> – online on 8 October 2009. See also <http://www.hurriyetdailynews.com/n.php?n=turkish-air-defense-buy-not-related-to-us-missile-shield-2009-10-05>. For the creation of a regional system including in the Baltic Sea, see *Defense News*, 28 September 2009; p. 25; 5 October 2009; p. 46.

Abbreviations and Acronyms

ABM	Anti-Ballistic Missile	IMDO	Israel Missile Defence Organisation
ABMT	Anti-Ballistic Missile Treaty	INSS	Institute for National Security Studies
Aegis	integrated naval weapons system, using the AN/SPY-1 Radar	IR	infrared
AKP	Adalet ve Kalkinma Partisi/Justice and Development Party	IRBM	Intermediate Range Ballistic Missile (range 2000-5500 km)
ASTER	Advanced Spaceborne Thermal Emission and Reflection Radiometer	LEU	low-enriched uranium
AN/SPY	see: "Aegis"	LRBM	long-range ballistic missile
AN/TPY	Army Navy / Transportable Radar Surveillance	MDA	Missile Defence Agency
BM	ballistic missile	MEADS	Medium Extended Air-Defence System
BMD	ballistic missile defence	MEP BP	Middle East Programme Briefing Paper
CEPS	Centre for European Policy Studies	MIT	Massachusetts Institute of Technology
CFR	Council on Foreign Relations	MoD	Ministry of Defence
CIA	Central Intelligence Agency	MoFA	Ministry of Foreign Affairs
CSIS	Center for Strategic and International Studies	MRBM	Medium-Range Ballistic Missile (range from 1000-2000km)
CSRC	Conflict Studies Research Centre	NATO	North Atlantic Treaty Organisation
DF-5	DongFeng 5 (Chinese missile)	NIC	National Intelligence Council
DoD	Department of Defense	NIE	National Intelligence Estimate
EU	European Union	nm	nautical miles
FY	fiscal year	NMD	national missile defence
GBI	ground based interceptor	NTI	Nuclear Threat Initiative
GBR-P	ground based radar - prototype	PAAMS	Principal Anti Air Missile System
HEU	highly enriched uranium	PAC-3	Patriot Advanced Capability (update no 3)
IAEA	International Atomic Energy Agency	PKK	Partiya Karkeren Kurdistan/ Kurdistan Workers' Party
ICBM	Inter-Continental Ballistic Missile (range more than 5500km)	PRC	People's Republic of China
IISS	International Institute for Strategic Studies	RIM	shiplaunched surface to air interception missile (US)

SBRIS	space-based infra-red system	TBM	Tactical Ballistic Missile (range up to 300km)
Scud	NATO codename for Soviet short-range missile	THAAD	terminal high-altitude area defence interceptors
SDI	Strategic Defence Initiative (“Star Wars Initiative”)	THAAD-GBR	Theater High-Altitude Area Defence Ground-Based Radar
SM	Standard Missile	TLVS	Taktisches Luft-Verteidigungs-System
SOFA	status of forces agreement	TMD	theatre missile defence
SPY-3	see “Aegis”	UF6	uranium hexafluoride
SRBM	Short-Range Ballistic Missile (range 300-1000km)	UN	United Nations
SS	(Soviet) surface to surface missile	WGU	weapon-grade uranium
START	Strategic Arms Reduction Treaty	WMD	weapons of mass destruction

Bibliography

- Hannes Adomeit, *Russland und Iran, Welche Ziele und Interessen verfolgt Russland? Wie verlässlich ist Moskau, wenn es darum geht, Teherans Aufstieg zur Atommacht zu verhindern?* Sozialwissenschaftliche Schriftenreihe des IILP, November 2009, Vienna
- Martin Agüera, *Amerikas Raketenabwehrpläne nach dem 11. September: Rolle und Optionen für Europa?*, In: Erich Reiter, Ernst M. Felberbauer (Eds.), *Perspektiven einer europäischen Raketenabwehr, Studien und Berichte zur Sicherheitspolitik*, 2/2002, Vienna, 61-88
- Ali M. Ansari, *Iran under Achmedinejad, the politics of confrontation*, The International Institute for Strategic Studies, Adelphi Paper 393, London, 2007
- Henri Barkey, *Turkey's perspectives on nuclear weapons and disarmament*, in Stimson Nuclear Security Series, vol. VI (22 September 2009) online http://www.carnegieendowment.org/files/Nuclear_Turkey.pdf; pp.67-81
- Klaus Becher, *Ziel und Zweck der U.S.-Raketenabwehr und die europäische Interessenslage*, in: Sozialwissenschaftliche Schriftenreihe des IILP, Reihe Studien, December 2007, p. 3-17;
- Joseph S. Bermudez, *A History of Ballistic Missile Development in the DPRK*, *Monterey Institute of International Studies*, Monitoring Proliferation Threats Studies, Occasional Paper Nr. 2, download at: <http://cns.miss.edu/pubs/opapers/op2/op2.pdf>, p.26ff
- Greg Bruno, *Iran's ballistic missile program*, in Council on Foreign Relations (CFR) online <http://www.cfr.org/publication/20425> - online on 15 October 2009; pp. 1-3
- Michael Colder, *Missile Defence, What the Obama Administration's Change of Policy Means for Europe and the United Kingdom*, in: RUSI Journal, October 2009, vol.154, no.5, p.14-19;
- Anthony Cordesman, *Understanding the key judgements in the new NIE on Iranian nuclear weapons*, in Center for Strategic and International Studies (CSIS), (4 December 2007) online http://csis.org/files/media/csis/pubs/071206_irannuclearnieanalysis.pdf; pp. 1-9
- Anthony Cordesman and Adam Seitz, *Iran Status Report - Iran and the challenges to US policy*, in CSIS, (11 August 2009) online http://www.csis.org/files/publications/090812_iranbrief.pdf; pp. 1-132
- Klaus Faupel, *Dimensionen der Souveränität*, in: Michael Take (Hg.), *Politik als Wissenschaft*, Berlin, 2006, p. 181-201;
- Joseph Ferguson, *US-Russia relations: Laying the groundwork*, in *Comparative Connections*, A quarterly e-journal of East Asian bilateral relations online http://www.csis.org/files/publication/0902qus_russia.pdf - online July 2009
- Mark Fitzpatrick, *The Iranian nuclear crisis: Avoiding worst-case outcomes*, in International Institute for Strategic Studies (IISS), Adelphi Paper 398 (November 2008), pp. 1-99
- Mark Fitzpatrick, *A Prudent Decision on Missile Defence*, *Survival*, vol.51, no. 6, December 2009, p. 5-12;
- Brad Glosserman, *Don't forget Asia*, in *Pacific Forum CSIS*, no. 62 (17 September 2009) online <http://www.csis.org/files/publication/pac0962.pdf>
- Bharath Gopalaswamy, *Iran missile program*, in BASIC Getting to Zero Papers no. 4 (15 July 2008) online <http://www.basicint.org/gtz/gtz04.pdf>; pp. 1-4
- Gustav C. Gressel, *Europäische Ostasienpolitik auf dem Prüfstand, Eine Evaluierung in den Problemfeldern der großen Politik*, Diplomarbeit, Universität Salzburg, 2007,
- Ahmed S. Hashim, *Iraq's Sunni Insurgency*, Adelphi-Paper 402, IISS London, 2009
- Efraim Inbar, *The need to block a nuclear Iran*, in *Middle East Review of International Affairs (MERIA)*, vol. 10, no. 1 (March 2006) online <http://meria.idc.ac.il/journal/2006/issue1/inbar.pdf>; pp. 85-104
- Iran: Nuclear intentions and capabilities*. National Intelligence Estimate, (November 2007) online http://www.dni.gov/press_releases/20071203_release.pdf; pp. 1-9
- The International Institute for Strategic Studies, *Strategic Survey 2001/2002, An Evaluation and Forecast of World Affairs*, Oxford, 2002;
- The International Institute for Strategic Studies, *The Military Balance 2002-2003*, Oxford, 2003;
- The International Institute for Strategic Studies, *Strategic Survey 2003/4, An Evaluation and Forecast of World Affairs*, Oxford, 2004;

- The International Institute for Strategic Studies, *Strategic Survey 2006, The IISS Annual Review of World Affairs*, London, 2006;
- The International Institute for Strategic Studies, *Strategic Survey 2007*, Oxford, 2007;
- Ephraim Kam (ed.), *Israel and a nuclear Iran: Implications for arms control, deterrence, and defense*, in Institute for National Security Studies (INSS), Memorandum no. 94 (July 2008) online [http://www.inss.org.il/upload\(FILE\)1216203568.pdf](http://www.inss.org.il/upload(FILE)1216203568.pdf); pp. 1-96
- Ephraim Kam and Ephraim Asculai, *American intelligence reappraises the Iranian nuclear issue*, in INSS Insight no. 39 (12 December 2007) online <http://www.inss.org.il/publications.php?cat=21&incat=&read=14>; pp. 1-2
- Saban Kardas, *Patriot missile procurement option sparks controversy in Turkey*, in Eurasia Daily Monitor, vol. 6, issue 170 (17 September 2009) online http://www.jamestown.org/programs/edm/single/?tx_ttnews%5Btt_news%5D=11444&tx_ttnews%5Bshow_view%5D=1
- Eugene Kogan, *Israeli perceptions of the Iranian issue*, in Conflict Studies Research Centre (CSRC), Middle East Series, 06/42 (September 2006) online: <http://www.da.mod.uk/colleges/arag/document-listings/middle-east>; pp. 1-21
- Konrad-Adenauer-Stiftung, *Raketenabwehr in Europa – die Diskussion in den USA, Tschechien, Polen und Russland*, Diskussionspapier, 25 pages, (2007) http://www.kas.de/wf/doc/kas_11771-544-1-30.pdf
- Andrew Kuchins, *Pressing the reset button in US-Russian relations*, in Center for Strategic and International Studies Critical Questions online http://www.csis.org/files/media/csis/pubs/090304_cq_kuchins_russia.pdf
- Gallia Lindenstrauss and Oded Eran, *Not just a bridge over troubled waters: Turkey and regional and international affairs*, in Shlomo Brom and Anat Kurz (eds.), *Strategic Survey for Israel 2009*. Tel Aviv: Institute for National Security Studies, 2009 online [http://www.inss.org.il/upload\(FILE\)1248343818.pdf](http://www.inss.org.il/upload(FILE)1248343818.pdf); pp. 83-93
- Georg Mader, *Assessing the Iranian missile threat*, in Military Technology (November 2009); pp. 36-37
- Yossi Mekelberg, *Israel and Iran: From war of words to words of war?*, in Middle East Programme Briefing Paper (MEP BP) (March 2007) online <http://www.chathamhouse.org.uk/publications/papers/view/-/id/462>; pp. 1-8
- Holger H. Mey, *Raketenabwehr – Einige grundlegende Gedanken zu einer Idee, deren Zeit gekommen ist*, in: Erich Reiter, Ernst M. Felberbauer (Ed.), *Perspektiven einer europäischen Raketenabwehr*, Studien und Berichte zur Sicherheitspolitik, 2/2002, Vienna, p.15-22
- Missile Defense Agency, *Elements, Ground-Based, Midcourse Defense (GMD)*, <http://www.mda.mil/system/gmd.html>
- Missile Defense Agency, *Fact Sheet, Upgraded Early Warning Radars (UEWR)*, <http://www.mda.mil/global/documents/pdf/uewr1.pdf>
- Missile Defense Agency, *Fact Sheet, Sea-based X-band Radar*, <http://www.mda.mil/global/documents/pdf/sbx.pdf>
- Missile Defense Agency, *Fact Sheet, Army Navy/ Transportable Radar Surveillance (AN/TPY-2)*, http://www.mda.mil/global/documents/pdf/an_tpy2.pdf
- Missile Defence Agency, *Testing, Building Confidence*, <http://www.mda.mil/global/documents/pdf/2009mdabook.pdf>,
- Missile Defence Agency, *Fact Sheet, Aegis Ballistic Missile Defence Testing*, http://www.mda.mil/global/documents/pdf/aegis_tests.pdf
- Missile Defense Agency, *Global Ballistic Missile Defense, A Layered Integrated Defense, BMDS Booklet, fourth edition*, Washington D.C., 2006;
- Missile Defense Agency, *The Missile Defence Programme 2009-2010*, August 2009, Washington D.C.;
- National Missile Defence Act of 1999*, http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi? dbname=106_cong_bills&docid=f:s257es.txt.pdf
- O.A., *Missile Defence Reloaded, A Phased Adaptive Approach for Missile Defence in Europe*, Military Technology, 11/2009, 29-34
- Mehmet Ogutsu, *Turkey: A major regional power to engage or confront Iran*, in Insight Turkey, vol. 9, no. 2 (April-June 2007); pp. 105-115

- Keith B. Payner, *Bush Administration Strategic Policy: A Reality Check*, *The Journal of Strategic Studies*, vol. 28, no. 5, October 2005, p.775-787
- Barry R. Posen, Andrew L. Ross, *Competing Visions for U.S. Grand Strategy*, in: *International Security*, Vol. 21, No. 3, Winter 1996/97, pp. 5-53
- Theodore Postol, *Technical addendum to the joint threat assessment of the Iran's nuclear and missile potential. The Sejil ballistic missile* online http://docs.ewi.info/JTA_TA_Sejil.pdf - online on 31 May 2009; pp. 1-20
- Andrea K. Riemer, *Strategische und geopolitische Überlegungen der USA zur EU-Integration der Türkei*, in: Erich Reiter (Ed.), *Sicherheitspolitische und strategische Aspekte eines Beitritts der Türkei zur Europäischen Union*, Vienna, 2006, p. 83-104 of 133 pages; <http://books.google.at/books?id=jfbyfUVepCQC>
- Uzi Rubin, *Iranian missile and outer space programs: Assessing present and future capabilities*, in *Washington Institute for Near East Policy* online <http://washingtoninstitute.org/html/pdf/rubin20091102.pdf>; pp. 1-30
- Christian Rumpf, *Dardanelles, Sea of Marnara, Bosphorus*, in: Rudolf Bernhardt (Ed.), *Encyclopaedia of Public International Law*, volume I, Amsterdam, a. o., 945-950, p.947-950
- Peter Sequard-Base, *Raketenabwehr, Bedrohung - Verteidigung, Eine physikalisch-technische Annäherung*, *Studien und Berichte zur Sicherheitspolitik*, 1/2003, Vienna; http://www.bmlv.gv.at/pdf_pool/publikationen/stb1_03.pdf
- Peter Sequard-Base, *Ausgewählte Simulationsberechnungen zur Raketenabwehr*, *Schriftenreihe des Amtes für Rüstung und Wehrtechnik*, Vienna, 2009; http://www.bmlv.gv.at/pdf_pool/publikationen/sim_berechnungen_rakabwehr.pdf
- Yigal Schleifer, *Turkey: Is Ankara set to become a vital player in revamped US anti-missile shield?*, in *Eurasia Insight*, (25 September 2009) online <http://www.eurasianet.org/departments/insightb/articles/eav092509>
- Dingli Shen, *Iran's nuclear ambitions test China's wisdom*, in *The Washington Quarterly*, vol. 29, no. 2 (Spring 2006), pp. 55-66
- Alexander Simon, *The Patriot Missile, Performance in the Gulf War Reviewed*, 15th July 1996, <http://www.cdi.org/issues/bmd/patriot.html>;
- Mark Smith, *Russian perceptions on the Iranian nuclear issue*, in *Conflict Studies Research Centre, Middle East Series 07/33* (October 2007) online <http://www.da.mod.uk/colleges/arag/document-listings/middle-east>; pp. 1-13
- Glenn H. Snyder, *Deterrence and Defence, Toward a Theory of National Security*, Princeton University Press, 1961;
- Strobe Talbott, *A Better base for cutting nuclear weapons*, in *Brookings* online http://www.brookings.edu/opinions/2009/0921_nuclear_proliferation_talbott.aspx
- Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems*, (download 17.12.2009), <http://www.state.gov/www/global/arms/treaties/abm/abm2.html>
- Sebnem Udum, *Missile proliferation in the Middle East: Turkey and missile defense*, in *Turkish Studies*, vol. 4, no. 3 (Autumn 2003), pp. 71-102
- The White House, *Washington, National Security Presidential Directive /NSPD-23*, December 16, 2006, www.fas.org/irp/offdocs/nspd-23.htm;
- Judith Yaphe and Charles Lutes, *Reassessing the implications of a nuclear-armed Iran*, in *McNair Paper* no. 69 (August 2005), pp. 1-84
- Andrei V. Zagorski, *Die Kontroverse über amerikanische Raketenabwehr in Europa: Lösungsversuche in der Sackgasse?* in: *Sozialwissenschaftliche Schriftenreihe des IILP*, Vienna, December 2007, p.18-24;
- Piotr Zalewski, *Missile Defence: A view from Turkey*, in *Centre for European Policy Studies (CEPS) Commentary*, (12 October 2009) online <http://www.ceps.eu/book/missile-defence-view-turkey>; pp. 1-2

Sozialwissenschaftliche Schriftenreihe – bisher erschienen

HEFT 1 (1981)

Albert Kadan: Parteifinanzierung in Österreich und der Bundesrepublik Deutschland

Erich Reiter: Vorschläge zur Neuregelung der Parteifinanzierung in Österreich
(vergriffen)

HEFT 2 (1982)

Wilhelm Brauner: Staatsausgaben
(vergriffen)

HEFT 3 (1984)

Erich Reiter: Reform des Bundesrates
(vergriffen)

HEFT 4 (1984)

Eva Steindl: Die Fremdenverkehrsgesetze der Bundesländer
(vergriffen)

HEFT 5 (1985)

Erich Reiter (Hg.): Die friedenserhaltenden Operationen im Rahmen der Vereinten Nationen. Der Beitrag der neutralen Staaten Europas
(vergriffen)

HEFT 6 (1985)

Heinz Vetschera: Die Rüstungsbeschränkung des österreichischen Staatsvertrages aus rechtlicher, politischer und militärischer Sicht
(vergriffen)

HEFT 7 (1986)

Lothar Höbelt: Die Bundespräsidentenwahlen in der Ersten und Zweiten Republik
(vergriffen)

HEFT 8 (1986)

Helmut Berger: Verfahrensökonomie zum Verfahren 1. Instanz nach AVG und BAO
(vergriffen)

HEFT 9 (1986)

Anton Pelinka: Grün-alternative Aspekte in Ideologie und Programmatik der SPÖ

Manfried Welan: Grün-alternative Aspekte in Ideologie und Programmatik der ÖVP

Erich Reiter: Fortschritts- und Wachstumsverständnis in Ideologie und Programmatik der FPÖ
(vergriffen)

HEFT 10 (1987)

Ulrike Leopold-Wildburger: Ökonomie und Ökologie im Test der Meinungen
(vergriffen)

HEFT 11 (1987)

Heinrich Schneider: Akzeptanzprobleme der österreichischen Landesverteidigung
(vergriffen)

HEFT 12 (1988)

Ulrike Leopold-Wildburger: Österreich am Weg nach Europa. Modelle – Stichproben – Methoden. Eine arbeitsökonomische Studie zum Meinungsbild der Österreicher

HEFT 13 (2006)

DIE ZUKUNFT EUROPAS

Franco Algieri: Zustand und Entwicklungsszenarien der EU im Lichte der Krise

Peter Schmidt: Die weltpolitischen Herausforderungen für die Europäische Union und die Vereinigten Staaten von Amerika: Gemeinsamkeiten und Unterschiede

Herbert Scheibner: Friedensprojekt „EUropa“ vor neuen Herausforderungen

Erich Reiter: Die Aufnahme der Türkei – eine sicherheitspolitische Überdehnung?

HEFT 14 (2006)

Waldemar Hummer: Zum weiteren Schicksal des Vertrages über eine Verfassung für Europa

HEFT 15 (2006)

STEUERPOLITIK

Ernst Gehmacher: Im Zyklus gefangen zwischen Wachstum und Krise

Erich E. Streissler: Steuerpolitik und Umverteilung

Oliver Ginthör: Steuergerechtigkeit aus Sicht der Steuerzahler

Herbert Scheibner: Überlegungen zur Steuerpolitik

HEFT 16 (2006)

KAMPF DER KULTUREN?

EUROPA UND DER ISLAM

Elsayed Elshahed: Zwischen Menschenrechten und Menschenwürde. Einige Gedanken zur Rezeptionsproblematik der Meinungsfreiheit

Hans Winkler: Toleranz ist keine Einbahnstraße

Herbert Scheibner: Ist ein „Kampf der Kulturen“ vermeidbar?

Erich Reiter: Integration und/oder Kulturkampf

KINDER UND GEWALT: OPFER UND TÄTER

Herbert Scheibner: Kinder und Gewalt: Opfer und Täter

Katharina Beclin: Erfordert die Entwicklung der Kriminalität Unmündiger neue Antworten?

Karin Gastinger: Ein politisches Statement zum Thema Kinder und Gewalt

Gabriele Zierung: Kinder und Gewalt: Opfer und Täter

Astrid v. Friesen: Kinder und Gewalt. Opfer und Täter

HEFT 17 (2006)

BEGLEITHEFT ZUR AUSSTELUNG

LIBERALE POLITIK IN ÖSTERREICH

Manfried Welan: Unwissenheit als Grund von Freiheit und Toleranz. Drei Weisungen aus dem alten Österreich: Friedrich August von Hayek, Karl Raimund Popper, Hans Kelsen

Lothar Höbelt: Das Schicksal des politischen Liberalismus in Österreich

Walter M. Iber, Erich Reiter: Die Soziale Marktwirtschaft als Ausdruck wirtschaftsliberalen Denkens. Programmatische Positionen der politischen Parteien seit 1945

Alfred Gerstl: Der verspätete Liberalismus im Österreich nach 1945. Politische, gesellschaftliche und „liberale“ Ursachen

Walter M. Iber: Der „Raab-Kamitz-Kurs“: Liberale Wirtschaftspolitik?

Friedhelm Frischenschlager, Erich Reiter: Teilweise überarbeitete Auszüge aus: Liberalismus in Europa

Anhang: Wirtschaftspolitische Positionen der österreichischen Parteien seit 1945: ÖVP, SPÖ, FPÖ/BZÖ und die Grünen

HEFT 18 (2006)

VOM LIBERALEN ZUM SOZIALEN STAAT

Erich Reiter: Einbegleitung: Über den politischen Gebrauch des Wortes „Liberalismus“

Manfried Welan: Liberales im Verfassungsrecht des Bundes

Urs Schöttli: Vom liberalen zum sozialen Staat. Eine ostasiatische Perspektive

Andreas Unterberger: Bürgerlich: Was ist das?

Gunther Tichy: Die neue Unsicherheit

Ernst Gehmacher: Die Gesellschaftsordnung des Erfolges. Der liberale Sozialstaat

Wolfgang Neumann: Welche Zukunft für den Sozialstaat? Europäischer und internationaler Vergleich

Jörg Schütze: Mittelstandsförderung und

Fremdkapitalbedarf. Basel II und die Folgen

Werner Pleschberger: Generationenvertrag – (noch) sozial gerecht?

HEFT 19 (2006)

DER LANGSAME WEG ZU EINER EUROPÄISCHEN SICHERHEITSPOLITIK

Lothar Rühl: Entwicklung und Möglichkeiten der ESVP

Reinhardt Rummel: Das Ende des Provinzialismus? Europäische und transatlantische Perspektiven der ESVP

Erich Reiter: Europas Sicherheitspolitik nimmt nur sehr langsam Gestalt an

Heinz Gärtner: Die Zukunft europäischer Armeen: Traditionalisten und Modernisierer. Woran orientiert sich Österreich?

Günter Hochauer: Verteidigungspolitische Erfordernisse. Konsequenzen aus dem stagnierenden Prozess einer gemeinsamen europäischen Sicherheits- und Verteidigungspolitik

Erich Eder: Miliz – Zukunftsträchtig für moderne Streitkräfte? Die Nationalgarde in den Vereinigten Staaten von Amerika

Helge Lerider: Die Türkei und die gemeinsame Außen- und Sicherheitspolitik der Europäischen Union

HEFT 20 (2007)

DIE GENERATIONENFRAGE AUS LIBERALER PERSPEKTIVE

Wolfgang Mazal: Brauchen wir einen neuen Generationenvertrag?

Urs Schoettli: Die alternde Gesellschaft. Eine zentrale Herausforderung an die liberale Politik

Werner Pleschberger: Perspektiven des Generationenvertrages. Realistische Solidaritätskultur, neue Rechtsnormen und Institutionen

Thomas Neumann: Der Nachhaltigkeitsfaktor. Ein Instrument zur Generationengerechtigkeit im österreichischen Pensionssystem

Andreas Kirschhofer-Bozenhardt: Spurensuche nach den großen Problemen

HEFT 21 (2007)

Schwerpunkt: FÖDERALISMUS ALS GESTALTUNGSPRINZIP

Franz Fiedler: Föderalismus als Gestaltungsprinzip

Peter Bußjäger: Streiflichter zum österreichischen Föderalismus

Gerhart Wielinger: Legenden, Glaubenssätze und die österreichische Wirklichkeit. Bemerkungen eines langjährig praktizierenden Föderalisten

Günter Voith: Schein und Sein im österreichischen Föderalismus

sowie:

Martin Malek: *Russlands „Energieaußenpolitik“ und der Südkaukasus.* Geopolitik, „frozen conflicts“

und europäische Abhängigkeiten

HEFT 22 (2007)

Schwerpunkt: GENFORSCHUNG, GENTECHNIK UND GENMEDIZIN

Andreas Kirschhofer-Bozenhardt: Statt eines Vorwortes: Genforschung verliert Schrecken.

Ergebnisse einer IMAS-Umfrage im Auftrag des Internationalen Instituts für Liberale Politik Wien

Michael Stormann: Genmedizin in Europa

Clemens Leitgeb: Genmedizin in der Onkologie

Wolfgang Schallenberg: „Genmedizin“. Gentechnik in der Medizin aus wirtschaftlicher Sicht

sowie:

Iris Kempe: Die europäisch-russischen Beziehungen und die *Russlandpolitik der EU*

HEFT 23 (2007)

LIBERALE POLITIK IN ÖSTERREICH.

Ein Nachheft zur Ausstellung des Internationalen Instituts für Liberale Politik vom 19. – 29.

September 2006. Liberale Politik in Österreich.

Eine Ausstellung des Internationalen Instituts für Liberale Politik vom 19. – 29. September 2006 in der Säulenhalle des Parlamentsgebäudes in Wien

Erich Reiter: Über den politischen Gebrauch des Wortes „Liberalismus“

Lothar Höbel: Das Schicksal des politischen Liberalismus in Österreich

HEFT 24 (2008)

KLIMAWANDEL UND ATOMENERGIE

Erich Reiter: Einführung in die Thematik Klimawandel, Schadstoffhandel und Atomenergie

Helmut Stubner: CO₂-Emissionszertifikatehandel – ein liberaler Standpunkt

Volkmar Lauber: Kyoto-Protokoll, Emissionshandel und Energiewende

Stefan Pickl: Der internationale Emissionszertifikatehandel im Spannungsfeld von ökonomischen und ökologischen Zielsetzungen

Dieter Drexel: Ökologie und Ökonomie im Spannungsfeld des Kyotoprotokolls

Erich Gornik: Klimaschutz und Kernenergie

HEFT 25 (2008)

Schwerpunkt: ÜBERLEGUNGEN ZUR NEUTRALITÄT

Erhard Busek: Neutralität Österreichs – Herz oder Museumsstück

Heinz Gärtner: Eine moderne Neutralität ist flexibel

Erich Reiter: Neutralität als österreichische Ideologie

Gottlieb F. Hoepfli: Neutralität in der Schweiz

sowie:

Peter W. Schulze: Elf Thesen *zur russischen Innen- und Außenpolitik* am Ende der zweiten Amtsperiode Putins

Günther Ofner: Die *EU als Energiemanager*

HEFT 26 (2008)

Schwerpunkt: ASIEN UND DIE AUßENPOLITIK DER EU

Urs Schoettli: Chinas Rückkehr auf die Weltbühne

Gustav C. Gressel: „Brothers in Evil“ oder „Apfel und Birne“: Übersicht über die Menschenrechts-

verletzungen, Demokratie- und Rechtsstaatsdefizite in der Volksrepublik China und Burma

Franco Algeri: Die Zentralasienpolitik der Europäischen Union: Interessen und Konflikte

sowie:

Eugene Kogan: Die Beziehungen *Israels* zur *NATO*

HEFT 27 (2008)

Schwerpunkt: GEORGIENKONFLIKT

Gustav C. Gressel: Der Krieg im Kaukasus vom 07.08.2008 bis 14.08.2008

Aschot Manutscharjan: Georgien suchte Krieg mit Russland

Eugene Kogan: The Russian-Georgian Conflict: An Assessment

Peter Schmidt: Der Georgische Knoten – Mögliche Beiträge der EU zur Beilegung des Konflikts

sowie:

Gerhard Will: Permanenter Ausnahmezustand

Birmas leidvoller Weg ins 21. Jahrhundert

Gudrun Harrer: Zur Rolle von Stammesstrukturen in Konfliktlagen: Das Beispiel *Irak* und die US-amerikanische „Using the Sheikhs“-Politik

HEFT 28 (2009)

Schwerpunkt: Hat die Marktwirtschaft Zukunft?

Gerald Schöpfer: Ist die freie Marktwirtschaft zum Untergang verurteilt?

Erhard Fürst: Ursachen der Finanz- und Wirtschaftskrise: Marktversagen? Staatsversagen?

Helmut Kern: Hat die Marktwirtschaft noch Zukunft? – Staatliche Regulierung löst die Probleme nicht

Bernhard Martin: Entwicklungschancen für Politischen Liberalismus in Österreich in Folge der weltweiten Finanzkrise. Eine makrosoziologische Diagnose

Rainer E. Schütz: Hat die Marktwirtschaft eine Zukunft?

sowie:

Walter Schragel: Schadenersatz für behindertes Kind?

Henriette Riegler: Der Staat Kosovo – wirklich ein Projekt Europäischer Sicherheit?

HEFT 29 (2009)

Ostasien – Geostrategischer Schwerpunkt der Welt

Urs Schöttli: Brennpunkte in Ostasien – Sicherheitspolitische Herausforderungen

Gudrun Wacker: Auf der Suche nach Harmonie: China als regionaler und globaler Akteur

Rudolf Logothetti: Die Rolle der USA in Ostasien – eine europäische Sicht

Eugene Kogan: The Russian-Chinese Disconnect in the Defence Industry Field

Sebastian Harnisch: The Korean Conundrum: Moderating Expectations and Containing Nuclear Extortion

Urs Schöttli: Japans Rolle in Ostasien und in der Welt
Yuan-hsiung Chen: The Security Situation of the Republic of China

Chong-pin Lin: Melting the Ice: Beijing's Emerging Taiwan Policy

Bill Keh-ming Chen: The Role and Influence of the United States in East Asia

Gustav C. Gressel: Anmerkungen zu den politischen Beziehungen zwischen der Europäischen Union und Taiwan

HEFT 30 (2009)

Überlegungen zu Staatsreform und Europapolitik

Heimo Hofmeister: Staat und Individuum

Christian Stadler: Österreichische Staats- und Verwaltungsreform aus liberaler Perspektive

Roland Vaubel: Nie sollst Du mich befragen? Weshalb Referenden in bestimmten Politikbereichen – auch in der Europapolitik – möglich sein sollten.

HEFT 31 (2009)

Beiträge zur ökonomischen und gesellschaftlichen Situation

Erhard Fürst

Die EU in der Finanz- und Wirtschaftskrise

Bernhard Martin

Konkordat: Kulturpolitischer Klotz am Bein moderner, liberal-demokratischer Staatlichkeit?

Andreas Kirschhofer-Bozenhardt

Wahlen gewonnen, Zukunft gefährdet?

Beqir Sadikaj Causes That Have Influenced Appearance of Trafficking and Prostitution in Kosovo, Ways of Deceits of Victims and Their Submission into Slavery

sowie:

Gustav C. Gressel

Bericht von der Veranstaltung: „Brauchen wir eine neue europäische Friedensordnung?“

Bücher des IILP

Johann Frank

Perspektiven der europäischen militärischen Integration

– Entwicklungsszenarien und Konsequenzen für Österreich –

Verlag: Ing. Harald Kurz 95 Seiten ISBN 978-3-9501854-9-2

Schriftenreihe zur internationalen Politik

Band 1

Erich Reiter (Hg.)

Die Sezessionskonflikte in Georgien

mit Beiträgen von:

Klaus Becher – Gustav C. Gressel – Egbert Jahn – Jörg Himmelreich

Iris Kempe – Eugene Kogan – Aschot Manutscharjan – Jürgen Schmidt

Peter Schmidt – Peter W. Schulze – Andrei Zagorski

Verlag: böhlau 330 Seiten ISBN 978-3-205-78325-1

Band 2

Erich Reiter (Hg.)

Der Krieg um Bergkarabach – Krisen- und Konfliktmanagement in der Kaukasusregion

mit Beiträgen von:

Meliha Benli Altunisik – Aser Babajew – Uwe Halbach – Egbert Jahn –

Eugene Kogan – Helge Lerider – Aschot Manutscharjan – Erich Reiter –

Peter W. Schulze – Oktay F. Tannisever – Andrei Zagorski

Verlag: böhlau 280 Seiten ISBN 978-3-205-78404-3

Sozialwissenschaftliche Schriftenreihe

Reihe Studien

Klaus Becher	Die USA als Faktor des Konfliktmanagements in Georgien	September 2007
Erich Reiter	Die Einstellung der Österreicher zu der Sicherheits- und Verteidigungspolitik und zur EU; Bewertung der Ergebnisse einer IMAS-Umfrage vom April 2007 und anderer Erhebungen	Oktober 2007
Peter W. Schulze	Energiesicherheit – ein Europäischer Traum. Russland als Energiemacht	Oktober 2007
Heinz Gärtner	Die Zukunft der Rüstungskontrolle	November 2007
Klaus Becher	Ziel und Zweck der US-Raketenabwehr und die europäische Interessenslage	Dezember 2007
Andrei Zagorski	Die Kontroverse über amerikanische Raketenabwehr in Europa: Lösungsversuche in der Sackgasse?	Dezember 2007
Egbert Jahn	Optionen für die Politik der EU gegenüber Georgien und den De-facto-Staaten Abchasien und Südossetien	Dezember 2007
Erich Reiter	Die Einstellung der Österreicher zu Kernenergie, Klimawandel und Genforschung Auswertung u. Kommentierung der Ergebnisse einer Meinungsumfrage	Jänner 2008
Erich Reiter	Bewältigung sozialer Probleme und Verbesserung der Wettbewerbsfähigkeit – Details einer Studie über „politische Denkmuster“ der Österreicher	Jänner 2008

Erich Reiter	Meinungsfreiheit – Details einer Studie über „Meinungsfreiheit in Österreich“	Februar 2008
Peter W. Schulze	Zieloptionen russischer GUS-Politik: Geopolitische Neuordnung des Sicherheits- und Kooperationsraumes oder vernachlässigte Konfliktzone?	März 2008
Oliver Ginthör Martin Haselberger Sandra Schreiblehner	Die steuerliche Entlastung des Mittelstandes zwecks besserer Vorsorgemöglichkeiten	März 2008
Stefan Pickl	Investitionsverhalten in internationalen Emissionshandelssystemen Ökologie und Ökonomie im Spannungsfeld des Kyoto-Protokolls	April 2008
Eugene Kogan	Sicherheitspolitik im Nahen Osten Israels Lehren aus dem Libanonkrieg – Russlands Rolle im Nahen Osten	Juni 2008
Urs Schöttli	China: Was hat sich seit 1976 ereignet?	August 2008
Hannes Adomeit Peter W. Schulze Andrei Zagorski	Russland, die EU und „Zwischeneuropa“ Drei Studien	Oktober 2008
Eugene Kogan	Military and Energy – Security Situation Around the Black Sea Area	November 2008
Gudrun Harrer	Souveränität und Nachkriegszeit: Der Irak nach dem Abschluss des Status of Forces Agreement mit den USA	Jänner 2009
Uwe Halbach Peter W. Schulze Andrei Zagorski Eugene Kogan	Machtpoker am Kaukasus Nachlese zum „Fünf-Tage-Krieg“ in Georgien im Sommer 2008 Vier Studien	Februar 2009
Peter W. Schulze Andrei Zagorski	Russische und europäische Energiepolitik im Zeichen der globalen Krise Die strategische Orientierung Russlands zu Europa?	Mai 2009
Hüseyin Bağcı	Changing Geopolitics and Turkish Foreign Policy	Juni 2009
Gerhart Wielinger	Überlegungen zum Thema Gestaltung der Verfassung im Hinblick auf die Sicherung einer rechtsstaatlichen und sparsamen Bewältigung von Staatsaufgaben	Juli 2009
Urs Schöttli	Wird der Westen auch weiterhin die Vorgaben für die künftige Gestaltung der Weltwirtschaft geben können?	August 2009
Erich Reiter	Libérale Gesinnung in Österreich – Auswertung einer IMAS-Umfrage	September 2009
Erich Reiter	Wie die Österreicher unser Wirtschaftssystem sehen – (IMAS-Umfrage)	September 2009
Eugene Kogan	Turkish-American Strategic Partnership versus Turkish-Russian Partnership without Strategy	Oktober 2009
Hannes Adomeit	Russland und Iran – Welche Ziele und Interessen verfolgt Russland? Wie verlässlich ist Russland, wenn es darum geht, Teherans Aufstieg zur Atommacht zu verhindern?	November 2009
Gustav C. Gressel Eugene Kogan	Missile Defence in Europe – Systems, Policies and Strategic Choices	März 2010

Das Internationale Institut für Liberale Politik Wien (IILP) wurde im Herbst 2005 gegründet und bezweckt die Förderung liberaler Politik, insbesondere in den Bereichen der Wirtschafts-, Sozial- und Finanzpolitik, internationalen Beziehungen, Europapolitik, Außen- und Sicherheitspolitik sowie hinsichtlich aktueller Fragen der österreichischen Politik.

Das IILP versteht sich als bürgerlicher und pro-europäischer Think-Tank für Österreich.

Im Rahmen seines wissenschaftlichen und gesellschaftspolitischen Programms lädt es zu zahlreichen Veranstaltungen.

Neben anderen Publikationen gibt es die „Sozialwissenschaftliche Schriftenreihe“ heraus.

www.iilp.at

IILP – ZVR Zahl 425665530



Internationales Institut
Liberale Politik Wien

Österreichische Post AG /
Sponsoring Post
Verlagspostamt 1010 Wien
GZ: 06Z037014 S

ISBN 978-3-902595-40-9

IILP

Internationales Institut für Liberale Politik Wien
SOZIALWISSENSCHAFTLICHE SCHRIFTENREIHE

Gesamtherstellung: Offsetdruck Ing. H. Kurz GmbH, 8682 Müzzuschlag/Hönigsberg, Industriepark 2