

Why would countries change their nuclear choices?

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I. Introduction

In 1932, according to the correspondence between Albert Einstein and Sigmund Freud, these two gentlemen discuss the possibilities how to prevent the catastrophes in atomic age. Upon Einstein's question whether it is possible to inoculate human beings against the "psychoses of hate and destruction"¹ that ultimately lead to war, Freud responded that aggression as well as love is necessary for survival. Regarding the atomic age, Freud maintained that "it is easier to denature plutonium than to denature the evil spirit of the men". Freud compared the power of an atom to an "axe in the hand of the pathological criminal".² This powerful axe, he lamented, had "changed everything, save our modes of thinking, and thus we drift toward unparalleled catastrophe." According to Vartan Gregorian, twelfth president of Carnegie Corporation of New York³, in the case combine all the developments in the security realm, such as September 11 and its aftermath, desire for nuclear capability to obtain "equal status" with nuclear powers, nuclear terrorism etc., one can state that "prospects of the global security environment slipping toward a nuclear 'tipping point' became more than theoretical possibility." (Nuclear tipping point, foreword ix)

This paper aims to demonstrate that nuclear tipping point might be in near future, if the "counter-proliferation team" loses the battle against "proliferation team". Due to the limited space, the paper will concentrate on the Middle East region. In order to reveal nuclear calculations in the region, following case-studies will be examined in depth: Egypt, Saudi Arabia, Syria, Iran, and Israel. Yet, most of the countries will have certain connections with countries in South Asia. These connections will be, of course, addressed, although case studies from South Asia are not going to be included as such. The questions that this paper will seek to find answers for are going to be applied to each case study in order to see the reasons for the particular national choices regarding nuclear weapons option. I will be looking for answers on following questions:

- What are the main factors for dropping the nuclear weapons capability?
- What is the role of domestic political factors and what is the role of external political factors?
- How can international pressure alter domestic choice?
- Is it feasible for the country to achieve nuclear weapons capability at the time being?

¹ <http://www.idst.vt.edu/modernworld/d/Einstein.html>

² <http://cc.usu.edu/~olorin/quotes.htm>, <http://www.dm.unipi.it/~tonietti/einetic.pdf>, http://www.un.org/Pubs/chronicle/2001/issue3/0103p36_2.html

³ <http://www.carnegie.org/sub/about/vgregorian.html>

- What is country's technological and economic capacity to produce nuclear weapons by itself? How difficult it is for country to obtain the nuclear materials and technology from foreign suppliers?
- Is decision-making public or rather it is purely decision within government?
- Is the renunciation seen as a final decision or rather subject to future review and therefore pending on the regional development?
- Does the country count on US in order to ensure its security? If US foreign policy changes, does that affect calculations of country's security requirements?
- How does acquisition of nuclear weapons of other countries affect the country's posture towards own nuclear capability?
- IF country will pursue nuclear capability, is it likely to be openly or clandestinely?
- Are there signs that country has already decided to reassess its nuclear abstinence?

These are some of the questions that are going to be answered primarily throughout case studies; however certain general thoughts are going to be addressed throughout the whole research paper.

Chapter II is introducing a reader to the nuclear weapons problem in the realm of international security while explaining counter-proliferation measures successfully accomplished already in 1940s.

Chapter III addresses the role of international organizations, such as United Nations, IAEA, CTBTO and CD to maintain the international security.

Chapter IV explains how NPT should be strengthened.

Chapter V discusses 2005 NPT Review Conference, its failure and reasoning behind that.

Chapter VI discusses how the world can come close to the nuclear tipping point.

Chapter VII addresses justifications for countries to change their previous decision to renounce nuclear weapons and decide for nuclear options instead.

Chapter VIII discusses why abstainers would change their nuclear choice.

Chapter IX is describing in detail following case studies in the Middle East region: Egypt, Syria, Saudi Arabia, Iran and Israel.

Chapter X is attempting to give a solution to the existing problem in the Middle East.

Chapter XI is conclusion of the topics discussed in the paper.

II. Nuclear power and proliferation and international security

At the inception of World War II, leading physicists on all sides were cognizant of the possible revolution in explosive power that might be extracted from a uranium bomb. However, each side was faced with a huge investment and scientific challenge before theoretical knowledge could be converted into an operational atomic weapon. American and British nuclear physicists felt they started their A-bomb projects considerably behind their German counterparts and feared Hitler's forces would be the first to have use of atomic arms. This evaluation was based on a number of considerations. The high caliber of German theoretical and experimental physicists like Otto Hahn, Paul Harteck, Werner Heisenberg, Fritz Strassman and Carl-Friedrich Von Weizsacker. German control of Europe's only uranium mine after the conquest of Czechoslovakia, capture of the world's largest supply of imported uranium with the fall of Belgium, German possession of Europe's only cyclotron with the fall of France and the German control of the world's only commercial source of heavy water after its occupation of Norway. Attacks on German nuclear installations from 1941 until the end of 1943 were not effective in doing more than harassing the German nuclear research effort. A key target was the German-controlled heavy water production plant, Norsk-Hydro, at Vemork, Norway. Heavy water was required to conduct nuclear fission experiments and denial of the Norwegian plant's output would cripple the German atomic bomb research effort.⁴

The very first act of counter-proliferation is dated back to the 1943, when Germany launched defensive act in its war of aggression against Norway. British intelligence recommended destruction of Norsk-Hydro at the earliest possible date. British paratroopers failed in their first raid in late 1942 when their gliders crashed during infiltration. In February 1943, six Norwegian saboteurs supplied and trained by the British, saboteurs broke the railway gate with an aim to put two explosives inside the plant. Saboteurs were successful enough to destroy vital parts of plant together with heavy water production capacity. Upon seeing a resumption of German production at the site, the RAF and American Eighth Air Force dropped over 400 bombs on the plant on November 16, 1943, inflicting only light damage. This raid, however, had positive results in that it persuaded the German authorities that Norsk-Hydro was an unsafe location for their heavy water production. Berlin decided to move every- thing back to Germany. This was a fatal mistake. Norwegians, still not satisfied with their counter-proliferation measures, wanted to make sure that even the semi-finished products already being transported from the plant would not arrive to

⁴ Phillip Gardner and F. Waller, "1943 and 1991: U.S. Wartime Experience in Counter proliferation-Counterforce Operations," SAIC, 1994, a research report prepared for the National Security Negotiations Division, Headquarters U.S. Air Force, The Pentagon, Washington, D.C., p. 8.

Nazi research facilities. Norwegian commando therefore bombed local ferry with the semi-finished products.⁵ Uncertain of this fact, however, the allies continued to fear that Germany might achieve the bomb and snatch final victory from defeat before they could overcome the Nazi forces in the field. Allied bombers continued to pound and destroy a number of German research laboratories until the end of the war, further retarding Nazi A-bomb possibilities.⁶ Till the day today, this exceptional power of nuclear weapons is calling for exceptional actions in order to prevent catastrophe with tremendous outreach.

After 1943, nuclear weapons entered in the realm of international affairs and reached global arena in the foreign policy decisions. Only 2 years later, US dropped 2 nuclear bombs on Japanese cities Hiroshima and Nagasaki that in fact illustrated destructive power of the nuclear weapons to the whole world.

By 1964, four other states crossed the nuclear threshold and tested the nuclear weapons. In 1949 it was former Soviet Union. United Kingdom followed in 1952, while France performed its testing only 8 years later. China followed such developments and joined nuclear club in 1964. By 1968, P-5 became the states recognized nuclear-weapons states according to Non-proliferation Treaty (NPT). Despite the calls for counter-proliferation instead of proliferation, India performed its so called “peaceful explosion” in 1974, when Indian Prime Minister Indira Gandhi received the news of successful test with code words “the Buddha smiles”. From China and India, the chain reaction led to Pakistan. New Delhi’s nuclear test energized Islamabad’s quest for “Islamic bomb”. On the other hand, Israel for example never openly admitted the possession of nuclear weapons. However, it is known that Israel certainly developed a nuclear capability by the end of the 1960s with a help of France. Instead, Israel still today prefers the policy of opacity even though it demonstrated its capability to counteract any attack that might be dangerous to its people or country as a whole. One example is dated in 1981, when Israeli fighter planes attacked Osirak, an Iraqi nuclear reactor complex that was at the time under development. It is the second example of counter-proliferation success after the Vermok action in Norway. Of course, Israeli attack didn’t include nuclear weapons, but Israelis demonstrated readiness and alertness to respond to any kind of threat. Rightfully, there are many speculations and doubts regarding Israeli possession of nuclear weapons. Unfortunately, none are confirmed. (Cohen 1998, NPIS).

⁵ Brooks, Op.Cit., pp. 61, 69-70. Marcel Baudot, *The Historical Encyclopedia of World War*

⁶ Geoffrey Brooks, *Hitler's Nuclear Weapons: The Development and Attempted Deployment of Radiological Armaments by Nazi Germany* (London, Leo Cooper, 1992) p. 61.

Statistically however, by the end of 1970s world climbed to previously unthinkable number of civilian nuclear programs. 45 non-nuclear weapons states had already their civilian nuclear programs.

Apart from the development of nuclear weapons, there have been certain positive developments in the area of abandonment of the nuclear arsenals. So far, only 4 states renounced their programs and arsenals. In 1991, upon the dissolution of the Soviet Union, Ukraine, Belarus and Kazakhstan abandoned their nuclear arsenals as a result of Cooperative Threat Reduction (CTR) program, known as Nunn Lugar treaty⁷. CTR program's aim is basically to "secure and dismantle weapons of mass destruction and their associated infrastructure in former Soviet Union states"⁸ where they are under very poor safeguards control and therefore almost as if at public disposal. Another country contributed to the non-proliferation regime in March 1993 – South Africa. International verification mission confirmed dismantlement of 6 gun-type explosives. Libya abandoned its nuclear program in 2003 after considerable international pressure.

According to NPT, nuclear weapons are temporarily legal in five countries that tested their capacities prior to 1 January 1967, not illegal in three others (Israel, India and Pakistan, which never joined the NPT); while North Korea's formal nuclear status is still unclear. In other states, nuclear weapons are forbidden. (Perkovich, 2003, NPIS). Bunn argues that without the NPT treaty, this figure could be much higher. (Bunn 2003)

Nonproliferation is the pre-eminent national security issue of our time, and there is probably no more important U.S. foreign policy goal than keeping nuclear weapons and the ingredients and know-how to make them out of the hands of those who would do us harm. But our current policies appear inadequate to this formidable task. A more comprehensive, proactive, and intelligence-based approach is more than required.

Considerable dedication, ingenuity, and scientific expertise have gone into designing these programs, but whether the programs can prevent nuclear terrorism is doubtful. It's a lot easier to identify measures of performance—number of tons of highly-enriched uranium (HEU) and plutonium secured, number of customs posts outfitted with radiation monitors, number of weapons scientists employed in civilian jobs—than it is to find measures of effectiveness.⁹

⁷ an initiative housed within the Defense Threat Reduction Agency based on a 1992 U.S. law sponsored by Senators Sam Nunn and Richard Lugar.

⁸ <http://www.dtra.mil/oe/ctr/>

⁹ <http://www.fpri.org/enotes/20050902.americawar.lee.rethinkingnuclearsecuritystrategy.html>

III. Role of International organizations and international security

Today, we are living in the world of nation states. That means that it is primarily states that have prominent position in world affairs. Organizations of various sorts, including international organizations, follow only as second in the hierarchy. That is why states have so much power to decide the issues in the world affairs and international organizations can only be neutral in that process or reflect the state actions. International organizations should be a cornerstone of the international nuclear nonproliferation and disarmament regime; however they unfortunately have no power over the state to decide the matters of concern. On the other hand, it is true that although international organizations don't possess ultimate power, they are still left with considerable influence in the area of expertise in the field. This is giving them valuable position of neutral expert that has a say in the world affairs. However states are still decision makers.

It was only after WW II and mainly during the Cold War when multilateral initiatives raised in significance despite the fact that security environment was promptly changing and is still changing today. Initiatives, to counter the spread of nuclear weapons and slow down the arms race to the point to provide the world with more safety than threat, still persist today. These are dealt on the stage of various international bodies out of which the **United Nations**, with 192 members, is the largest international organization dealing with a wide range of international security topics. The principal UN organs that address nonproliferation and disarmament issues are the **General Assembly (First Committee), the Security Council, and the Department of Disarmament Affairs (DDA)**.

Under Article 11 of the UN Charter, the function of the General Assembly is to consider and discuss "the general principles of cooperation in the maintenance of international peace and security." The General Assembly can make recommendations to Member States and the Security Council. General Assembly can also "call the attention of the Security Council to situations which are likely to endanger international peace and security."

The Disarmament and International Security Committee (First Committee), a subsidiary body of the General Assembly, recommends resolutions and decisions for adoption by the General Assembly. Issues discussed in the First Committee range from nuclear weapons and testing to nuclear weapon-free zones and confidence building measures regarding disarmament.

Another very important organ of the UN is the Security Council that consists of five permanent members (China, France, Russia, United Kingdom, and United States – in this case nuclear weapons state sometimes referred to as "nuclear club") and 10 non-permanent members.

Article 26 of the UN Charter stipulates the following functions of the Security Council: “In order to promote the establishment and maintenance of international peace and security with the least diversion for armaments of the world's human and economic resources, the Security Council shall be responsible for formulating, with the assistance of the Military Staff Committee referred to in Article 47, plans to be submitted to the Members of the United Nations for the establishment of a system for the regulation of armaments .” The Military Staff Committee advises and assists the Security Council in maintaining international peace and security.

The Department on Disarmament Affairs (DDA) provides substantive and organizational support to UN Member States for disarmament norm-setting through the work of the General Assembly and the First Committee, and other bodies. The DDA’s Weapons of Mass Destruction Branch supports multilateral efforts to strengthen the international norm on disarmament and non-proliferation of weapons of mass destruction and cooperates with other UN agencies, such as the International Atomic Energy Agency (IAEA).

The roots of the IAEA can be traced after World War II, when solemn international efforts to promote nuclear non-proliferation. Truman Administration presented the Baruch Plan in 1946¹⁰ that proposed the verifiable dismantlement and destruction of the U.S. nuclear arsenal, which, at that time, was the only nuclear arsenal in the world. After all governments would have cooperated successfully to accomplish two things, plan suggested: (1) the establishment of an "international atomic development authority," which would actually own and control all military-applicable nuclear materials and activities, and (2) the creation of a system of automatic sanctions, which not even the U.N. Security Council could veto, and which would proportionately punish states attempting to acquire the capability to make nuclear weapons or fissile material. Despite the international support Baruch Plan obtained, it failed to be implemented.¹¹ Despite the failure to be implemented, it remained official American policy until 1953, when President Eisenhower made his "Atoms for Peace" proposal before the U.N. General Assembly. Eisenhower's proposal eventually led to the creation of the International Atomic Energy Agency (IAEA).¹² Under the "Atoms for Peace" program thousands of scientists gained education in nuclear science and later at home instead of contribute to nonproliferation efforts pursued secret weapons programs in their home country.¹³

Since its founding by the United Nations in 1957, the **International Atomic Energy Agency (IAEA)** has promoted two, sometimes contradictory, missions: on the one hand, the

¹⁰ named after Bernard Baruch, America's first representative to the United Nations Atomic Energy Commission

¹¹ Soviet Union planned to veto it in the Security Council

¹² http://en.wikipedia.org/wiki/Nuclear_proliferation

¹³ As its the case of Pakistan, for futher information see http://www.atimes.com/atimes/South_Asia/IK29Df02.html

Agency seeks to promote and spread internationally the use of civilian nuclear energy; on the other hand, it seeks to prevent, or at least detect, the diversion of civilian nuclear energy to nuclear weapons, nuclear explosive devices or purposes unknown. The IAEA now operates a safeguards system as specified under Article III of the Nuclear Non-Proliferation Treaty (NPT) of 1968, which aims to ensure that civil stocks of uranium, plutonium, as well as facilities and technologies associated with these nuclear materials, are used only for peaceful purposes and do not contribute in any way to proliferation or nuclear weapons programs.¹⁴ Upon completion of a safeguards agreement with a NPT member states, the IAEA is authorized to conduct inspections of the country's declared nuclear sites and facilities.

The IAEA's Board of Governors, which is comprised of 35 members, approves safeguards procedures and supervises their implementation. If a state is found in non-compliance with its safeguards agreements, the Board of Governors is to call on the state to provide more information and may refer it to the UN Security Council for further action.

Another body is **The Preparatory Commission of the Comprehensive Nuclear-Test Ban Treaty Organization (CTBTO)** that was established by signatory member states only in 1996. The Preparatory Commission carries out preparations for the effective implementation of the Comprehensive Test Ban Treaty (CTBT). The CTBT was opened for signature in 1996, but has not yet entered into force.¹⁵ The CTBT prohibits any kind of nuclear weapon testing and has developed global verification system, International Monitoring System that monitors the earth and detects possible nuclear explosions.¹⁶

Last but not least body that deals with nuclear nonproliferation is **the Conference on Disarmament (CD)**, established in 1979 as the single multilateral disarmament negotiating forum of the international community. The CD has a special relationship with the United Nations but remains an autonomous institution; it adopts its own Rules of Procedure and its own agenda, taking into account the recommendations of the General Assembly. The terms of reference of the CD include practically all multilateral arms control and disarmament problems. The CD focuses on issues such as the cessation of the nuclear arms race and nuclear disarmament; prevention of nuclear war and of an arms race in outer space; new types of weapons of mass destruction and new systems of such weapons including radiological weapons . The CD and its predecessors have negotiated such major multilateral arms control and

¹⁴ http://en.wikipedia.org/wiki/Nuclear_proliferation

¹⁵ Latest nuclear test made by North Korea in October 2006 was for example recognized and documented by IMS verification system. This contributed to the international affairs dispute whether North Korea really performed the test it claimed.

¹⁶ <http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/arms-control-disarmament/international-organizations.htm>

disarmament agreements as the nuclear Non-Proliferation Treaty (NPT), and the Comprehensive Nuclear-Test-Ban Treaty (CTBT). In March 1995, the CD adopted a mandate to negotiate a ban on the production of fissile materials for nuclear weapons. However, negotiations on the Fissile Materials Cut-Off Treaty (FMCT) have been stalled for years.¹⁷

¹⁷ <http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/issues/arms-control-disarmament/international-organizations.htm>

IV. How to strengthen Non-proliferation Treaty

There are two types of nuclear non-proliferation mechanisms: multilateral agreements (treaties) and bilateral agreements. In the case of multilateral treaties, it is important that as many parties voluntarily contribute and fully comply with the terms and conditions established in the treaty in order for the treaty to attain its goals. Speculations, whether Non-Proliferation Treaty (NPT) contributed to the prevention of the spread of nuclear weapons is not generally agreed among experts, but definitely, it didn't attain its goal – ultimate compliance worldwide. Pursuant to the NPT, the IAEA safeguards system has been applied to all declared facilities of the parties to the NPT, along with other measures, such as export control measures (see chapter on export control measures).

NPT is number one treaty in the global nuclear non-proliferation regime. Treaty entered into force on March 1970. In 1995 the treaty was extended to be in force indefinitely. As of 2006, there are 189 countries parties to the treaty.¹⁸ Five states are recognized by the NPT as nuclear weapon states (NWS): France (signed 1992), the People's Republic of China (1992), the Soviet Union (1968; obligations and rights now assumed by Russia), the United Kingdom (1968), and the United States (1968). The U.S., UK, and Soviet Union were the only states openly possessing such weapons among the original ratifiers of the treaty. Only four nations are not signatories: India, Israel, Pakistan and North Korea. India and Pakistan both possess and have openly tested nuclear bombs. Israel has had a policy of opacity regarding its own nuclear weapons program. North Korea ratified the treaty, violated it, and later withdrew. Although the concept of "pillars" appears nowhere in the NPT, the treaty is nevertheless sometimes interpreted as having *three pillars: non-proliferation, disarmament, and the right to peacefully use nuclear technology.*¹⁹ The treaty recognizes the inalienable right of sovereign states to use nuclear energy for peaceful purposes, but restricts this right for NPT parties to be exercised "in conformity with Articles I and II" (the basic nonproliferation obligations that constitute the "first pillar" of the Treaty). As the commercially popular light water reactor nuclear power station uses enriched uranium fuel, it follows that states must be able either to enrich uranium or purchase it on an international market. Mohamed ElBaradei, Director General of the International Atomic Energy Agency, has called the spread of enrichment and reprocessing capabilities the "Achilles heel"²⁰ of the nuclear

¹⁸ <http://cns.miis.edu/pubs/inven/pdfs/apmnpt.pdf>

¹⁹ Ambassador Sudjadnan Parnohadiningrat, 26 April 2004, United Nations, New York, Third Session of the Preparatory Committee for the 2005 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, furnished by the Permanent Mission of the Republic of Indonesia to the United Nations (indonesiamission-ny.org)

²⁰ <http://www.iaea.org/NewsCenter/Statements/2007/ebsp2007n014.html>

nonproliferation regime. As of 2007 13 states have an enrichment capability.²¹ Mohamed ElBaradei has said that by some estimates thirty-five to forty states could have the knowledge to acquire nuclear weapons.²² Some of these statements are slowly but surely confirming what U.S. President John F. Kennedy forecasted in 1963 when was extremely concerned about the arms race reality at the time due to the nuclear missile crisis over Cuba and an escalating Cold War arms race. He maintained that by 1990s, over 20 countries around the world would possess nuclear weapons. Slowly but surely his nightmare is coming to our reality.²³ Despite this pessimism, we have to admit that the Treaty is the umbrella treaty under which so many others find vital shelter and strength. It has its problems and limitations, but as an international tool for progressive disarmament, it is of key importance. The NPT is essentially a nuclear disarmament treaty.²⁴ Since we can see that NPT is not working as it was projected by its architects, what can we do to strengthen it? According to Ambassador Jackie Wolcott Sanders, U.S. Representative to the Conference on Disarmament in Geneva and the Special Representative of the President for the Non-Proliferation of Nuclear Weapons, in the eJournal USA, following measures should be endorsed:

- adoption of policies to discourage future noncompliance, including a cutoff of nuclear cooperation²⁵
- enactment of effective controls to ensure compliance with NPT nonproliferation obligations and to keep territories free of illicit activities, such as those of the Khan network²⁶
- implementation of the provisions of U.N. Security Council Resolution 1540 (which requires states to enact and enforce legal and regulatory measures to prevent proliferation of weapons of mass destruction, their delivery systems, and related materials)
- strengthen export controls on enrichment and reprocessing technology
- cooperation to interdict illegal transfers of nuclear material and equipment that is fully consistent with domestic legal authorities and international law and relevant frameworks, such as the Proliferation Security Initiative

²¹ <http://www.iaea.org/NewsCenter/Transcripts/2007/ft190207.html>

²² <http://www.unidir.org/pdf/articles/pdf-art2185.pdf>

²³ <http://www.iaea.org/Publications/Booklets/Safeguards2/intro.html>

²⁴ <http://abolition2000europe.org/index.php?op=ViewArticle&articleId=26&blogId=1>

²⁵ Article I obligation not “in any way” to assist any non-nuclear-weapon state to manufacture nuclear weapons, including cutting off nuclear assistance to any non-nuclear-weapon state in violation of its NPT nonproliferation obligations and seeking halt in the use of any previously supplied nuclear items

²⁶ Article II of NPT is a crucial point in the treaty and its implementation should be more effective in order to clearly distinguish between military purposes of nuclear program and peaceful purposes of nuclear program. Article II and its effective enforcement should require detailed investigation regarding potential violations.

- universal acceptance of comprehensive NPT safeguards agreements along with the Additional Protocol (which expands the ability of the IAEA to inspect and monitor nuclear-related activities), and the adoption of that safeguard standard as a condition of nuclear supply ²⁷

Sanders also addressed the importance of disarmament obligations envisioned in Article VI to minimize or annihilate the military arsenal. However Sanders lacks to address the importance of economic factor in decision making process of the countries which is of rather great influence in this particular field.

²⁷<http://usinfo.state.gov/journals/itps/0305/ijpe/sanders.htm>,
http://www.ciaonet.org/olj/fpa/fpa_mar05/fpa_mar05_sanders.pdf

V. 2005 NPT review conference and its failure

The 2005 NPT Review Conference²⁸ was the biggest failure in the history of this Treaty. While previous reviews failed to adopt the final declaration due to single issue, the CTBT, as in 1980 or 1990, or the failure was compensated with indefinite extension of the NPT, as was the case in 1995, this time the disagreement among the parties was present across all frontlines.

Conference was primarily attempting to deal with two major crises in the NPT regime, specifically in the East Asian region and Iran's case. Another issue addressed was how to deal with three non-signatories, respectively Israel, India, Pakistan and North Korea²⁹. No one is left to accede to the treaty except for these 4 states, however ever since there's failure to attract these de-facto nuclear-weapon states. These three "holdouts" can only enter into NPT as non-nuclear weapons states and that is the major obstacle for them to overcome due to their security concerns. Consequently, NPT regime is practically in bad shape. And review conference didn't make thing easier at all, rather opposite. However, it has to be stressed that no sustainable repair of the regime is possible without Washington's cooperation and understanding that multilateral arms control and disarmament are as important instrument as U.S. national security policy.

During the conference, some countries proposed measure to counter nuclear terrorism and to endorse Res. 1540, Proliferation Security Initiative (PSI) and the amended Convention for the Physical Security of Fissile Material, but all these proposals, of course, remained ineffective in the absence of a final declaration. Concerning the risk of nuclear terrorism, the NPT also offers useful elements that need to be complemented by other measures (such as an international convention against nuclear terrorism, UNSC Res. 1540, or the Proliferation Security Initiative (PSI)). The chances for adoption of above mentioned measures were wasted due to incapability of delegations to handle the issue. The idea to bomb Osama out of the caves of Tora Bora with "mininukes" shows the main discussion points at the conference, and such points are just too ridiculous to be discussed seriously. The talk about "fundamental change"³⁰ addressed by U.S. representative is purely an empty rhetorical cover to conceal governmental policy change in the

²⁸ As of February 2005, 63 NPT States parties have ratified Additional Protocols to their IAEA Safeguards Agreements for the Agency's application of strengthened safeguards, outlined in the "Model Additional Protocol" (INFCIRC/540 Corr.) which was approved by the IAEA

Board of Governors in May 1997. Currently 152 States have safeguards agreements with the IAEA and a total of 908 facilities are under routine safeguards inspections. The increase in the number of Additional Protocols since the 2000 Review Conference has been significant, with 42 additional States having signed such protocols and 53 States have brought them into force. Information adapted from <http://www.un.org/events/npt2005/presskit.pdf>

²⁹ North Korea originally ratified the treaty, however later violated it and in 2003 completely withdraw from the NPT treaty

³⁰ Cf. Statement by Ambassador Jackie Sanders to the 2005 Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons, US. Implementation of Article VI and the Future of Nuclear Disarmament, Main Committee I, New York, May 2005

U.S. Arguments addressing Al Qaida and Osama Bin Laden only cover the policy shift that was well under way before Al Qaida even struck in New York and Washington, D.C.³¹ While at conference the only acceptable result for U.S. would be legally binding treaty, the Bush administration refuses to ratify the CTBT, it is quitting ABM Treaty, as well as it sabotages BWC Protocol. Here we can see the principle that US uses quite often – others have to comply while we don't have to comply with them. If treaties become impossible and political commitments unreliable, the law of the jungle obtains.³² The decisive responsibility of the US positions for the failure of the Conference has already been proven. American policy was pursuing with great determination the John Bolton line of devaluing multilateralism and international law.³³ Along this way NPT has ostensibly lost a lot of its meaning for the current US security policy. One thing, however, was remarkable: The US shied away from isolation. Whenever the US stood alone in its group, Washington fell into line. The reason behind this attitude of U.S. delegation however was not to avoid being the only one going against the wall, but rather to avoid being the only one exclusively being responsible for Conference's failure.

Basically, the outcome of the Conference was that as long as the nuclear-weapon states are not ready to make real concessions, the non-aligned will keep on opposing to agree to any strengthening of the non-proliferation side of the NPT regime. On the other hand, there's evident negative approach of US and France to move towards nuclear disarmament. Even more, they refused to re-affirm their "unequivocal commitment" to proceed towards complete nuclear disarmament that was given in the "Thirteen Steps". We basically arrived at deadlock. If delegations don't proceed with constructive negotiation with sticks and carrots approach with as much equality as possible, the consequences may be fatal. Unfortunately, for the present US government the NPT is not of great importance. Sadly enough, without U.S. leadership or at least cooperative involvement, no positive outcome is likely to occur.

³¹ Ivo H. Daalder/James M. Lindsay, *America Unbound: The Bush Revolution in Foreign Policy*, Washington, D.C. 2003

³² Weapons of mass destruction committee, chairman Hans Blix, No. 31
<http://www.wmdcommission.org/files/No31.pdf>

³³ Harald Müller/Annette Schaper, *US-Nuklearpolitik nach dem Kalten Krieg*. Frankfurt/M, HSFK-Report 3/2003

VI. Nuclear tipping point

Today, almost six decades after the emergence of the nuclear age, we are again living in the world of fright. The reason is the same as couple of decades ago, the spread of nuclear weapons. However today, as apart from the situation before, the danger is escalated with the number of countries that may view the nuclear weapons arsenal as a tool to maintain their security. Originally there was worldwide concern that one or two countries may find nuclear weapons useful in their security policy. While today, the danger is greater due to the concern that many countries will consider nuclear weapons useful for their security. Nuclear conflict may spark in any part of the world, in the case nuclear weapons get to the wrong hands. However probability that it would occur in the regions such as Middle East and Northeast or Southeast Asia is much greater. It is more likely that countries will work quietly and methodically to acquire the technology and materials necessary to build nuclear bomb on short notice, once political decision is made. What is unavailable on the open market might be obtained on the black market due to flourishing illicit trade in nuclear materials and technology between so called “rogue states” (sometimes labeled as pariah). Standard procedure, due to lack of cooperation between countries to trace purchase of such materials, is to obtain the technology component by component, therefore buy one part from one country and another component from another country. In other words, regardless if the process will be fast or slow, we might slowly but surely be approaching nuclear “tipping point” as labeled by Mitchel B. Reiss. In this case, many countries will decide to acquire nuclear technology on the short notice, consequently triggering proliferation epidemic.³⁴ As former director of the CIA George Tenet testified before Senate Select Intelligence Committee on February 11, 2003, “The desire for nuclear weapons is on the upsurge. Additional countries may decide to seek nuclear weapons as it becomes clear their neighbors and regional rivals are already doing so. The ‘domino theory’ of the twenty-first century may well be nuclear.”³⁵ Should this occur, few will be comfortable with scientific assurances that “more may be better.”

Another issue, unquestionably of great importance in the Middle East region, is the chemical and biological weapons. Why I specifically referring to Middle East? It is because it is primarily this region that has the highest ratio of countries that are not parties to the Conventions against Biological and Chemical weapons. Some scientists claim that in certain cases, the release of biological or chemical weapons might result in a worse scenario than if the region would be

³⁴ Malcom Gladwell, *The Tipping Point: How Little Things Can Make a Difference* (Little, Brown, 2000)

³⁵ Senate Select Intelligence Committee, *Current and Projected National Security Threats to the United States: Hearing before the Committee on Intelligence, S. Hrg. 108-161, 108 Cong. 1 sess., February 11, 2003*

devastated by nuclear weapons. The leading suspects in the realm of chemical and biological weapons are: Iran, Iraq, Syria, and Libya in the region. However, today it is not a danger of states possessing any of these weapons. World is rather concerned about terrorist groups or extreme religious sects such as Aum Shinrikyu that killed dozen of Japanese citizens and contaminated over 300 miles of Tokyo subway system when they released sarin gas in 1995.

According to Mitchell B. Reiss, “Powerful reasons have always existed for states to obtain nuclear weapons. These reasons have included the desire to intimidate and coerce rivals, the search for enhanced security against regional or international rivals, the status and prestige associated with mastering nuclear technology, and domestic politics and bureaucratic self-aggrandizement.”³⁶ These incentives, either in a single form or combination of couple of them, were responsible for proliferation that persisted during the cold war. Unfortunately for us, they persist today as well.

³⁶ Scott D. Sagan, “Rethinking the Causes of Nuclear Proliferation: Three models in Search of a Bomb”

VII. Why countries cross the border to nuclear power

In order to analyze countries, first in general terms, later according to circumstances in particular case studies, we should identify certain potential factors that may possibly lead to further proliferation. According to Kurt M. Campbell, there are 5 international and domestic factors to be considered for future nuclear proliferation:

- change in the direction of US foreign and security policy
- breakdown of global nuclear nonproliferation regime
- erosion of regional or global security
- domestic imperatives
- increasing availability of technology

Change in the direction of US Foreign and Security Policy

For the very long time, US allies, countries such as Japan, South Korea, Taiwan, Germany, Egypt and many others, were dependant on American foreign policy in order to estimate the their own security policy situation. Certain aspects of American policy that are to the interest of the allies are stability of the American nuclear deterrent, US security guarantees, US rhetorical commitment and participation in the global non-proliferation regimes, US commitments not to tear off US security from that of its allies through the development of defensive systems. Recently, there have been few changes in some of the above mentioned areas. US foreign policy has always been to certain extent unilateralist, however, during the last decade, it is more unilateralist than before. US is primarily considering US concerns and to certain extent neglecting concerns of others. This may lead countries to the conclusion that US is drifting away from its commitments to the other countries while only paying attention what is important for US themselves. It has to be pointed out that US unilateralism, perceived or real, can be interpreted in both ways. For example, in the case that strong action is needed against North Korea, by this act US will assure its Asian friends, particularly Japan and South Korea of its loyalty. However, one can never know if the unilateralism will be to ones advantage or will run against him. Unilateralism may sometimes cause dramatic unintended consequences for US allies, if US fails to balance out its actions.

Another key issue is the case of US developing new nuclear weapons. Further development of the nuclear weapons may be seen as retreat from the path of disarmament as projected in the NPT and therefore consequently causing weakening of the non-proliferation regime in global terms.

Breakdown of global nuclear nonproliferation regime

In the realm of global nuclear non-proliferation regime, US have to be careful about its “double standards” policy regarding India, Pakistan and Israel, in comparison to Iran and North Korea. While India, Pakistan and Israel suffered little to no long-term diplomatic or economic penalties, Iran and North Korea did. Some critics see this policy as encouraging other potential nuclear states to develop their capabilities.

Eroding Regional or Global Security

In some cases, threat perceived from the neighbor in security terms might be more than sufficient incentive for the country to adopt pro-nuclear stance. For example, when India strengthened its nuclear program, Pakistan felt threatened by India and had to develop nuclear capabilities on its own to maintain harmony and equality in the region and to be able to defend itself in the case of India’s attack. However, on the other hand, pariah state successful acquisition of nuclear weapons might destabilize the proliferation in the respective region and thus cause further arms race with devastating consequences.³⁷

Despite the fact that countries tend to concentrate on the regional threats to their national security, the new emerging tendency over the past years is global terrorism that is posing the threat to international stability as a whole. However, it is also true that increasing domestic terrorism could as well lead to larger systemic insecurity.³⁸

Domestic imperative

States that are declining are suffering from various forms of insecurity. This might trigger the acquisition of the nuclear weapons in order to “keep their standard” in the international affairs. Nuclear weapons facilities might be and easy “relatively cost-effective and technically achievable equalizer that could prevent the nation from sinking into oblivion or being tested by rising regional rivals” according to Campbell.³⁹ This “regime pessimism” is currently in play in virtually all states in the Middle East.

Increasing availability of technology

Additional reason why countries can decide to pursue nuclear weapons is simply that in today’s speed of development, is much easier to acquire capability needed for nuclear weapons.

³⁷ Francois Heisbourg, “A work in Progress: The Bush Doctrine and Its Consequences,” *Washington Quarterly*, vol. 26, no. 2 (Spring 2003), p.85.

³⁸ Nuclear tipping point, Campbell, p. 26

³⁹ Nuclear tipping point, Campbell, p. 27

Even acquiring fissile materials may become easier with the time. The main potential, unfortunately, still lies in the territory of former Soviet Union.⁴⁰ This reason however is unlikely to be the solely reason for such decision. It is more likely to be accompanied by serious threat to the country's position in the global arena, threat to its security or existence, or long economic recession and difficulties emerging from economic deficiency.⁴¹

⁴⁰ William C. Potter and Elena Sokova, „Illicit Nuclear Trafficking in the NIS: What's New? What's True?“ Nonproliferation review, vol.9, no.2 (Summer 2002), pp. 112-120

⁴¹ Graham Allison, “How to Stop Nuclear Terror,” Foreign Affairs, vol. 83, no.1 (January-February 2004), pp.64-74

VIII. Why abstainers reconsider their choices

In order to find out how fragile our nuclear nonproliferation regime, it might be helpful to find out why certain countries refrained from pursuing nuclear weapons. Countries that made their decisions quite recently (in the time frame 10-15 years ago) are South Africa, Argentina, Brazil, Belarus, Kazakhstan, and Ukraine.

Out of Middle Eastern countries, Egypt, Saudi Arabia, Syria, and Iran have formally renounced nuclear weapons by adhering to the NPT and accepting comprehensive IAEA safeguards on their nuclear facilities. In order to explain the particular cases more in detail, we should see more general picture beforehand.

Geographically, or geo-strategically, the countries such as Saudi Arabia or Syria are neighbors of the so-called rogue states that have actively sought nuclear weapons. Furthermore, Egypt and Saudi Arabia experienced the cold period in the relationship with US due to certain uncertainties that recently emerged in their otherwise long-standing and quite close relationship. In the same countries, there is a probability of a political change coming in near future that might significantly alter the domestic environment in which the decision making is taking place. On the other hand, there is some evidence that Saudi Arabia will lack technical infrastructure to produce nuclear weapons indigenously in the near future, however has huge advantage that compensate the disadvantage – huge capital that is ready to be invested in pursuing nuclear weapons technology, most likely from the good old friend, Pakistan, or Egypt or Syria.

IX. Case studies

This chapter will examine why Egypt, Saudi Arabia and Syria abstained from their choice for nuclear weapons. We will also elaborate on the question if that decision is likely to be amended in the coming years and we will try to find out why. Along that context, we will try to define Iran's nuclear ambitions that are still uncertain till today. In the end of the following chapter we will address the problems that Israel is referring to as well as the possibility for Middle East to be Nuclear Free Zone.

a. Egypt

Egypt is in the region where it is generally known that has world's greatest concentration of programs for weapons of mass destruction. However, Egypt was one of the first third world countries to embark on civil nuclear program. Its military however played very dominant role in its political system. Egypt was a founding member of the movement of nonaligned countries, and therefore natural leader of the contemporary Arab world. It sees itself as a key player in the Middle Eastern affairs. Its leader, President Hosni Mubarak, has pledged that when Egypt needs nuclear weapons, it "would not hesitate" to acquire them.⁴² Frankly, Egyptian leaders most probably reached the conclusion many years ago that the nuclear capability is not in their country's best interest and seeking such capability might undermine other national priorities that are much higher than nuclear ones. Egyptians are determined to promote the peace and stability in the region, as well as economic development and friendly relationships with US.

Egypt entered the nuclear field in 1955, when its Egyptian Atomic Energy Authority (AEA) was created. Original motivation appears to be peaceful in order to pursue economic development out of new technology.⁴³ However, Ibrahim Hilmy Abdel Rahman, secretary of Nasser's cabinet and secretary general of AEA's governing council was told that for that time being, the program should be directed at peaceful applications, while keeping the program in such a shape that would preserve military option, just in case.⁴⁴ The military option was need primarily due to unclear Israel's intentions in the security aspect. When Israeli Prime Minister, David Ben-Gurion, in 1960 announced Israel's undergoing project of building nuclear reactor at Dimona in Negev Desert, President Nasser responded that if Israel acquired nuclear weapons,

⁴² Mubarak interview in Al-Hayat, cited in Elizabeth Bryant, "Egypt Might Consider Nukes," United Press International, October 5, 1998.

⁴³ Jim Walsh, "Bombs unbuilt: Power, Ideas and Institutions in International Politics," Ph.D dissertation, MIT, 2000, chap.6, p.6.

⁴⁴ Ibid., p.7.

Egypt would have to acquire them at any price.⁴⁵ Some scientists many times questioned real intention of President Nasser to acquire nuclear weapons. Head of the Al-Ahram Strategic Studies Center, Abdel Moneim Said, maintained that Nasser “looked at options” but seriously doubted if real actions would have had taken place.⁴⁶ During the Sadat years, President Sadat reconfirmed the statement of former President Nasser, that Egypt will obtain nuclear weapons in the case Israel does too.⁴⁷ The foremost priority for President Sadat was at the time regaining the land lost from 6 day war with Israel in 1967. In November 1977 President Sadat traveled to Jerusalem to sign the Camp David accords only one year later, and the Israeli-Egyptian peace treaty in March 1979. The peace treaty resulted in bilateral relationship with US, which would provide Egypt with major foreign assistance to compensate Cairo with loss of aid from Arab countries which saw Egypt as a traitor. Since 1979 Cairo receives \$ 2 billion annually⁴⁸ in economic and military assistance, same as Israel, however population of Israel and Egypt cannot be compared in this matter. However, in the area of defense cooperation, US became Egypt’s main supplier of equipment. Still during the administration of President Sadat, Egypt decided to sign the NPT treaty in 1968, however maintained reluctant to ratify it hoping that it will put a pressure on Israel to join NPT too. Sadat’s era can therefore be judged as a very pro-stability, and pro-economic development in the Middle East. Generally at that time, Israel and Egypt together with US enjoyed profitable relationships with renunciation of nuclear weapons at the same time. During the recent president’s era, President Mubarak tried to avoid nuclear weapons issue. Despite the threat that Israel possessed to Cairo, Cairo understood that if it starts to pursue nuclear weapons other Middle Eastern states will pursue such programs as well and that will consequently undermine Egypt’s influential role in the regional affairs.⁴⁹ However the regional asymmetry was still disturbing to Egyptian elite and public as an aftermath. During the negotiations leading to 1979 peace treaty, Egypt attempted to force Israelis to renounce their program as a part of the treaty.⁵⁰ Multilaterally, Egypt together with Iran supported UN GA resolution in 1974 calling for Middle East to be made a nuclear-weapons-free zone. Despite the narrowing of options, Egypt didn’t close off all the paths to nuclear weapons. Egypt has a scientific potential, and if it were prepared to sacrifice the economic benefits from US and other national priorities, it would be able to find other economic resources to support the program.

⁴⁵ Ibid., p.9.

⁴⁶ Abdel Moneim Said, director of Al-Ahram Strategic Studies Center, conversation with Robert J. Einhorn, Cairo, March 16, 2003.

⁴⁷ Rosen, “A stable system,” p. 1368

⁴⁸ Nuclear tipping point, Robert J. Einhorn, p. 49

⁴⁹ Emily Landau, “Egypt’s Nuclear Dilemma,” Strategic Assessment, vol. 5, no.3, November 2002. (www.tau.ac.il/jcss/sa/v5n3p5Lan.html)

⁵⁰ Interview, ABC News, February 27, 1977, cited in Shai Feldman, Israeli nuclear deterrence (Columbia University press, 1982), p.67.

Currently, it lacks facility and expertise for fissile material production; however it could be possibly distributed from shadowy networks such as from Libya, Iran, North Korea, etc. Surprisingly enough, Presidential Adviser Osama el-Baz claims that nuclear weapons “are not in the Egypt’s interest, now or tomorrow.”⁵¹ Speaker of the People’s Assembly, Ahmad Fathi Srouf⁵², also agrees that, “No one in Egypt is currently thinking about becoming a nuclear power.” The main reason why Egyptians are not convinced to have the nuclear power is because they fail to imagine for what purpose it would be used. To fight an enemy? Who is an enemy? Jerusalem, Tel Aviv? Bombing Jerusalem or Tel Aviv with nuclear weapons, as one military officer said, “would mean bombing Palestinians.”⁵³ Moreover, Egyptians trust more the purpose of the chemical, biological and missile capabilities in order to fight potential treat form Israel. ⁵⁴

Even in the case of public declaration by Israel regarding its nuclear facilities, Egypt is not likely to pursue its nuclear weapons program. The question is whether Egypt would rethink its options if Iran eventually acquires nuclear weapons. Egyptians are generally worried about their political and ideological rival in the Middle East, Iran. After the 1991 Gulf war, Egypt and Syria and states of Gulf Cooperation Council joined together to ensure themselves with protection against stronger neighbors, in this case Iraq and Iran. However, recently, Syria has stronger connections with Iran. In the case Iran really acquires nuclear weapons, Egypt will need to fulfill its regional security responsibilities with support of US, and therefore would not need nuclear weapons on its own. However development of Iranian nuclear bomb might trigger development of Arab nuclear bomb, most likely in countries like Libya, Syria or Algeria. Apart from security aspect, there is also low chance that political aspect of the regional development would make Egypt rethink their choice. Ambassador Nabil Fahmy believed that political factors would be only secondary considerations for Egypt. Any decision regarding nuclear weapons option would be made on the basis of specific regional threats to Egypt’s security and would not be drive by questions of status or prestige. ⁵⁵ Weakening of the US-Egyptian relations is also unlikely to cause the change in the non-nuclear weapons direction. Regarding domestic factors, Egyptian public is content with the status quo, however maintains that this opinion is valid only as long as President Mubarak is in power. It is assumed that if a smooth transition to a like-minded successor occurs it would mean continuation of Egypt’s nuclear abstinence. However, situation that might move

⁵¹ El-Baz conversation, March 13, 2003.

⁵² Ahmad Fathi Srouf, conversation with Robert J. Einhorn, Cairo, March 16, 2003.

⁵³ Qadry Said, conversation with Robert J. Einhorn, Cairo, March 13, 2003

⁵⁴ In 1975 Egyptian minister of war Abdel Ghany El-Gamasy said, “Weapons of mass destruction are not limited to nuclear weapons. Egypt has enough of other types of weapons of mass extermination and it has the capability of retaliating to an Israeli nuclear blow by making use of these weapons.” Feldman, Israeli nuclear deterrence, p.69.

⁵⁵ Fahmy interview, February 2003

things in a different direction is involvement of religious figures in the political matters. For example, in 1999 Mohammed Sayyid al-Tantawi, Sheikh of al-Azhar and the highest ranking cleric in the Egypt, called on Arabs and Muslims “to acquire nuclear weapons as an answer to Israeli threat.”⁵⁶

In fact, the most probable way for Egyptians to develop nuclear weapon program would be combination of several elements: highly threatening regional security situation, loosening of US-Egyptian ties, and lowering of perceived penalties for development of nuclear weapon program. Along that line, Iran acquisition of nuclear weapons would cause serious instability in the Middle East, as well as Israeli provocative act in the nuclear area. Other than that, Egypt is unlikely to change its determination for non-nuclear solution in the region.

b. Syria

In recent decades, despite the struggle between Arab state system and Israel, Syria’s leaders projected the great image of the country and its enduring prominence and leadership of pan Arab cause. With USSR’s collapse, Syria lost its patron, and today it seeks to establish or correct its ties with US, Russia and European states in particular.

In 1970s Syria started looking for nonconventional options that would provide sufficient deterrent to Israel. At that time, Syria developed chemical weapons program without total reliance on Soviet Union. US officials acknowledged that development in 1980s.⁵⁷ By 1990s, its stockpiles included sarin and at least development of nerve agent VX. Syria never acceded to the Chemical Weapons Convention arguing that it will only do so after Israel accedes too.⁵⁸ During the Gulf war, Syria decided to change the relationship status with US, and consequently it benefited for service in the coalition during the war more than \$2 billion from Gulf states.⁵⁹ Another strategic choice was establishment of terrorist organizations, such as Palestinian Islamic Jihad, Hamas, etc. These are actually the cards Syria plays when it interacts with Israel and US.

Since Bashar Asad assumed power, there has been perception that Syria maintains its reluctant position of having settlement with Israel. Decision makers are not inclined to have a war conflict with Israel as such; however low-grade tension is desirable to create more pressure.

⁵⁶ “Highest Ranking Official Cleric in Egypt Calls for Arabs and Muslims to Acquire Nuclear Weapons to Counter Israel,” Special Dispatch Series, no. 59, November 19, 1999, Middle East Media Research Institute (MEMRI) (<http://memri.org/bin/articles.cgi?Page=archives&Area=sd&ID=SP5999>)

⁵⁷ Testimony by former CIA director William Webster in 1989, as cited in Federation of American Scientists, “Syria-Special weapons”, www.fas.org/nuke/guide/Syria/

⁵⁸ M. Zuhair Diab, “Syria’s Chemical and Biological Weapons: Assessing Capabilities and Motivations,” Nonproliferation review, vol.4 (fall 1997), p.104.

⁵⁹ Daniel Pipes, Syria Beyond the Peace Process, policy paper 41 (Washington Institute for Near East Policy, January 1996), p.41

Unintentionally or intentionally, US-led ouster of Ba'athi regime in Iraq in April 2003 has generated new crisis for Syria's national security. Syria was many times accused of shipping dual-use items to Iraq and therefore Syrian-Iraqi relationship was very close.⁶⁰ IAEA records indicate more than 60 technical projects in Syria. Syrians have however reached an advanced level of nuclear expertise that could possibly be useful in weapons program. Syria has signed NPT in 1968 and ratified it a year later. In 1976 Syrians established Atomic Energy Commission in Damascus and pursued bilateral agreement with France in order to transfer the nuclear technology.⁶¹ Syria attempted to engage in bilateral agreements to acquire nuclear power reactors. One report refers to 1988 attempt to create a \$3.6 billion reactor program with technical help from the Soviet Union, Belgium, and Switzerland.⁶² Syria's first success in acquiring nuclear reactor was in 1991 from China. This reactor had no military application as confirmed by IAEA after Syria signed safeguards agreement.⁶³ More recently, Syria strengthened its relationship with Russia since 1997. In 1998, Russia provided Syrian counterpart with one light water reactor, subject to IAEA safeguards. After Syrian vice president visited Moscow in January 2003, both sides confirmed that military technology cooperation was central part of bilateral relationship. Apart from Russia, Syria maintains constant contact with North Korea for missile technology and keeps its ties with Iran and Pakistan. According to Ze'ev Schiff, one of the Israel's most respected security experts, it is possible "that a number of Arab countries would one day form a coalition aimed at obtaining nuclear weapons."⁶⁴

For instance, should Iran succeed in its nuclear weapons program, Syria would be facing confusing situation. On the one hand, it would be obliged to feel anxiety together with other Arab countries, but in fact it would not be that scared as other states will be since it has the closest ties with Iran from all Arab world. Formal reaction would be very much suppressed, in the case that there is hostile reaction from Arab world which will be dampened by Iranian diplomacy. Syria is more likely to see Iranian nuclear weapons as useful deterrent against Israel. According to the Institute for National Strategic Studies at National Defense University, "Syria would not care that much".⁶⁵ On the other hand, Arabs will continue to be at least suspicious about Iranian hegemony, in the case it persists. Syria could possibly see Iranian nuclear program

⁶⁰ UN SC resolution 1441

⁶¹ Shai Feldman, "Nuclear weapons and Arms control in the Middle East" (Cambridge, Mass.: Center for Science and International Affairs, Harvard University, 1997), p.67

⁶² Michael Eisenstadt, "Syria's strategic weapons," *Jane's intelligence review*, April 2003, p.168.

⁶³ Feldman, "Nuclear weapons and Arms control in the Middle East" (Cambridge, Mass.: Center for Science and International Affairs, Harvard University, 1997), p.67

⁶⁴ Ze'ev Schiff, "Weapons of Mass destruction and the Middle East: The View from Israel," working paper (Houston: James A. Baker III Institute for Public Policy, Rice University, March 2003).

⁶⁵ Kori N. Schake and Judith S. Yaphe, "The Strategic Implications of a Nuclear-Armed Iran" (Washington: Institute for National Strategic Studies, National Defense University, 2001), p.29.

as a threat to its strategic interests, however this would not indicate that Syria will seek nuclear capability alone. It is more likely that Syrians would justify their approaching to nuclear weapons in the relation to the Arab-Israeli conflict. Syria is determined to get Golan Heights, currently occupied by Israel, back in its territory, as well as other Arab territories. Along this line, Syria fear that Palestinians will make a deal without Syrians and that would reduce Syria's regional influence while their myth would fade away too. Therefore Syria's ultimate goal is peace in the region under its own conditions, however without asymmetry, and that includes military arsenal aspect. According to Ellen Laipon, the drivers that would most likely change Syrian position on the nuclear weapons are national security requirements coming from asymmetry; prestige considerations as a loss of status in the region due to other countries' nuclear advancements; and a new relation with US that could change Syria's perception about its freedom. Due to their small size, and insecure regional situation, Syrian leaders might conclude that it would be advisable to explore their nuclear options, so called hedging option, as permitted by membership in the NPT.

⁶⁶

c. Saudi Arabia

The Kingdom of Saudi Arabia denounced its nuclear weapons when it signed NPT in 1998. At that time, it was king and his advisers who decided upon a legislature, and had no obligation to consult his choice with a public. Some experts claim that Saudi Arabia "excluded even the most senior military officers from the national security decision-making."⁶⁷ What Saudis were originally interested is not nuclear weapon program, but rather systems that could hit Tehran, while being deployed outside the range of Iranian surface-to-surface missiles", the military analyst Anthony Cordesman wrote.⁶⁸ The first intermediate-range missile came from China, to the disappointment of the Washington who refused to sell the missile to Saudis due to simple fact – Israel can be reached by that weapon too. Americans perceived this as a possible threat and secret pursuing of nuclear weapons. According to Richard Murphy, Assistant Secretary of State for Near East Affairs, Saudis "assured us (Americans), at the level of kind, that they don't have and they have no intention of acquiring either nuclear or chemical warheads."⁶⁹

After Saudis adhered to NPT, they didn't stop developing their nuclear program. However, usual motivations, such as security or status, were missing in Saudi Arabia's case. Saudis didn't possess or expertise not technological equipment to develop their program. Possible

⁶⁶ Ariel Levite, "Never Say Never: Nuclear Reversal Revisted," *International Security* (Winter 2002-03), p. 59.

⁶⁷ Robert Pelletreau, personal communication to Thomas W. Lippman, November 8, 2002

⁶⁸ Anthony Cordesman, "Saudi Arabia: Guarding the Desert Kingdom (Boulder, Colo.: Westview, 1997), p 48.

⁶⁹ Richard Murphy, testimony to House Foreign Affairs Committee, 100 Cong., 2 sess., May 10, 1988.

sources of technology are point out to Pakistan or more recently North Korea. Saudi Arabia never signed agreement with IAEA in regard to safeguards, nor did it sign CTBT. Despite this fact, IAEA maintained that “As far as the agency is aware, Saudi Arabia does not have any significant amounts of nuclear material or material in nuclear facility that would require inspection under the Agency’s standard comprehensive safeguard agreements”.⁷⁰ Saudis argument that would use any “excuse” for lack of energy resources in the country would obviously not be credible due to country’s extensive resources in crude oil and natural gas. Interestingly, Mr. Khilewi, Saudi diplomat posted to the UN mainly to nonproliferation issues, said in the interview with Middle East Quarterly in 1998, “It was clear to me that current system of nuclear proliferation is wrong. The NPT is based on selective proliferation. It has double standard. I myself am against nuclear proliferation in Saudi Arabia, Pakistan, and Iraq as I am against it in America, Israel and India.”⁷¹

Saudi Arabia doesn’t face any external threats to its existence, as for example Israel does. However, for decades Saudis were engaged in conflicts with Egypt and Yemen in 1960s, the Soviet Union during cold war, Iran in 1980s, Iraq in 1990s. All these conflicts reinforced sense of vulnerability in the country. Despite its defense expenditures in the last decades, Saudis forces have serious shortages of manpower, lack of training and technological background. In addition to that, country is facing extreme problems in its leadership, mainly because in the case of the split of the House of Saud by Islamic extremists, people like Osama bin Laden would contribute to country’s nuclear direction path. As Bin Ladin said: “It is the duty of Muslims to possess these weapons.”⁷²

According to the State Department, Saudi Arabia’s military spending declined by almost 22% from 1998 to 2000; Saudi Arabia’s purchases of American equipment under the Foreign Military Sales program declined from more than \$2,5 billion in 1992 to less than \$ 2 billion in 2000.⁷³ In 2003, George Tenet, former director of Central Intelligence told Congress, “Demand creates market. The desire for nuclear weapons is on upsurge. Additional countries may decide to seek nuclear weapons as it becomes clear their neighbors and regional rivals are already doing so.”⁷⁴ One of the options how Saudis can “go nuclear” is that new Iraqi government and leadership will be dominated by anti-American Shiite religious hierarchy allied with Tehran. This

⁷⁰ Jan Alexander Lodding, IAEA verification officer personal communication to Thomas W.Lippman by email, January 31, 2003

⁷¹ “Saudi Arabia is trying to kill me,” Middle East quarterly, vol. 5, no.3, September 1998 (www.meforum.org/article/409)

⁷² Jane Corbin, *Al-Qaeda* (New York: Nation Books, 2002), p.58.

⁷³ Department of State, 1999 annual report on Military spending to House and Senate Appropriations Committees.

⁷⁴ George Tenet, *The Worldwider Threat in 2003: Evolving Dangers in a Complex World*, report to Senate Select Committee on Intelligence, 108 Cong., 1 sess., February 11, 2003.

would be direct threat to the House of Saud and therefore potentially nuclear-armed one. Even before the Iraq war, arguing the case for Saudi acquisition of nuclear capability, Richard L. Russell observed that “it would be imprudent, to say at least, for Riyadh to make the cornerstone of (its) national-security posture out of an assumption that the United States would come to the kingdom’s defense under any and all circumstances.”⁷⁵ Let’s consider the case if an angry Congress cuts off Saudi Arabia from future purchases of US military equipment and forces the withdrawal of US military trainers, and if Israel threatened a preemptive strike, the Kingdom’s position would be uncertain.

As a conservative, Sunni Muslim nations with similarly overlapping interests and complementary strengths, Pakistan and Saudi Arabia had been considering formal security agreements since 1950s. Appeal is more than obvious: Pakistan had military know-how, trained manpower, and experienced forces but no money; the Saudis lacked military and industrial capability but had plenty of cash.⁷⁶ US governmental officials assume that Pakistan and Saudi Arabia have an understanding by which, according to Thomas W. Lippman, Pakistan’s nuclear capabilities would be made available on demand to Saudi Arabia if Saudis found themselves in extreme situation. Of course, the whole process would be guaranteed by Saudi’s funding of Pakistan’s nuclear program.⁷⁷ Unfortunately, Saudis have no longer full confidence in American support. US have strategic and economic interests in Saudi Arabia, but preservation of Saudi rule is not one of them. Americans would be comfortable with any government that would maintain good relations with West. However, as Saudis often point out, the change in the elective system might result in a militant Islamic regime hostile to US.

d. Iran

Iranian nuclear program can be traced back to 1950s. However the first US supplied research reactor was placed in Tehran Nuclear Research Center at the end of 1960s. It was not before oil crisis in 1973 that Shah began huge investments in the nuclear energy. Iran concluded contract with US (1974), Germany (1976) and France (1977). Ayatollah Khomeini was not personally involved in the nuclear issues, according to the founder and the head of the Atomic Energy Organization of Iran established in 1979.⁷⁸ In fact all the countries that are parties to the NPT may come closer to the nuclear-weapons status while observing provisions of the treaty and

⁷⁵ Richard L. Russell, “A Saudi Nuclear Option?” *Survival*, vol 43, no.2 (Summer 2001), p. 70.

⁷⁶ Nuclear tipping point, Thomas W.Lippman, p. 135

⁷⁷ Nuclear tipping point, Thomas W.Lippman, p. 137

⁷⁸ Etemad, A. “Iran”, in H.Muller (ed.) *A European Non-proliferation policy*, Oxford: Clarendon Press, 1987.

associate safeguards agreements with IAEA. Due to the shocking revealing that Iran has been pursuing for the last 18 years fuel-cycle activity, there's tremendous pressure put on Iranian case. Unfortunately world is divided into two camps: US and its allies pushing sanctions and open-up of Iranian nuclear program in order to determine its peacefulness or inclination towards military application, and China and Russia who are having economic interest in the Iranian case and are therefore putting the breaks on the whole process.

Due to Iranian policy of “confuse and mislead as much as you can”, it is hard to find reliable information about the real situation. The only reliable information regarding the program can be obtained from the IAEA. The accuracy of information is usually checked by national intelligence agencies.⁷⁹

According to Sverre Lodgaard, there are 4 possible scenarios for Iran's case:

1. Iran is building comprehensive indigenous program for peaceful utilization of nuclear energy

It basically majority of information that we obtained so far is in line with above stated option. However there are certain concerns and questions that are not answered yet. Presently Iran uses the same type of reactor, 40MWt, as India used for its first nuclear explosion in 1974. For peaceful purposes, such as medial and agricultural use, small reactors would be more than sufficient. Another question, as in the case of Saudi Arabia, is that any argument concerning economic part of the problem is more than suspicious due to huge reserves of the whole region of the crude oil and natural gas. Third element is involvement of prestige and pride in the arms race in the Middle East. Fourth, Iran is stressing its self-sufficiency and independence. However, uranium markets have been buyer's market for the long time, therefore independence would not last for the long time. Finally, if the program is peaceful, why does the government conceal almost all the information about the program?

2. Iran went for nuclear weapons under the umbrella of the NPT, and tries to keep for program on course as best it can

This option is not completely discarded, since technically it would be possible to secretly acquire nuclear weapon program for military purposes due to advantages the NPT gives, such as closer access to the nuclear power. The program went uninterrupted until 2002. Iran cooperated with Agency on very superficial level, however constantly refusing to disclose information. Basically balancing between cheating and not cheating. Naturally, Iran doesn't accept any

⁷⁹ Herch, S.m. The coming wars, New Yorker, 24 January 2005

inspection in the country, therefore Agency is unable to detect any traces of the nuclear production capabilities.

3. When the program was exposed, and subsequent attempts at evasive action were unsuccessful, Iran decided to become fully transparent about everything involving fissile materials, but without revealing any work on non-nuclear components of nuclear weapons.

For years, Iranian decision makers coped with US sanctions fairly well. The compromise therefore was leave aside whatever weapon ambition leading figures had in mind, press ahead with fuel-cycle programs, and the uranium enrichment programs in particular, and become fully transparent.⁸⁰ After 2 years of work from the side of IAEA, Iran offered transparency only to let Agency find out about no new undeclared facility or activity.

4. Iran has pursued two programs more or less in parallel: a civilian program and a separate production line for weapons

Assuming that at some point the civilian program will have to be declared, Iran has build separate production line for nuclear weapons run by the military. Israel appears to be convinced that there is separate, undetected military production line in Iran. US also assert that there are more undetected facilities and activities.

Analyzing all four scenarios, we might come to the conclusion that scenario 2 and 3 appear to be the closest to Iranian reality. US maintain that Iran has weapons program all the time, while others are more for the civilian program with military spin-off. Scenario 4 is a little bit more complicated. It is a big question why Iran gambled to accept the Additional Protocol when it didn't have to do that at all. Only minority of IAEA member states are parties to the Protocol, while the rest is Non-aligned Movement, where Iran belongs now.

Quite recent report about the Iranian nuclear program status provided by the Agency in middle of November 2007, maintains that Iran reached major milestone of 3000 operating centrifuges but they are working way below their capacity. Consequently, it can be assumed that Iran is still not enriching to the level that would produce a bomb-grade fuel. However, it cant be denied that Iran is pursuing nuclear program that is way behind civilian uses.

According to latest news dated in November 2007, Iran has halted its nuclear program in 2003. Furthermore Iran is still trying to repair its facilities that are constantly having technical difficulties. National Intelligence Estimate judges “with moderate confidence that the earliest

⁸⁰ Perkovich, G. Changing Iran's Nuclear Interest, Policy outlook, Carnegie Endowment for International Peace, 2005

possibility date Iran would be technically capable of producing enough HEU for weapons is late 2009, but this is very unlikely.”⁸¹ Israel reacted on the report as expected – with disappointment and cautiousness, while at the same time quietly getting ready for possible arms conflict. Iranian President Ahmadinejad called for Israel to be “wiped off the map” but many analysts do not anticipate him seeking openly military confrontation. It is rather assumed that if Tehran wants a bomb, it is primarily for power-projection in the face of US “regime – change” campaigns in the region.⁸²

e. Israel

Israel maintains a policy of opacity regarding its nuclear program, which started with French assistance in the late 1950s. The Israeli government neither confirms nor denies the possession of nuclear weapons, but it is believed that Israel possesses some 100-200 nuclear weapons, making it the fifth and possibly fourth largest nuclear power, ahead of Britain, and possibly ahead of France. No concrete evidence on nuclear testing is available. Israel is the only country in the Middle East that is not a member to the nuclear Non-Proliferation Treaty (NPT).

When US intelligence first discovered Israel’s Dimona nuclear reactor in 1960, the US government failed to put a halt to Israeli nuclear activities. It is estimated that Israel had produced its first nuclear weapons by 1967, and started a missile program around the same time. Today, Israel also maintains a functioning missile defense system, the Arrow theater missile defense system.

Regional players, especially Egypt and Iran, have repeatedly pressured Israel to disarm its nuclear arsenal. Since the 1980s, the United Nations General Assembly (UNGA) has passed annual resolutions calling upon Israel to join the NPT as a non-nuclear weapon state. Israel’s status as a *de facto* nuclear state is also a common theme of debate at NPT meetings. It is generally believed that a peaceful resolution to Middle Eastern affairs cannot be achieved without ending the Israeli nuclear program. The IAEA has initiated a security dialogue with the Israeli government, seeking Israeli support for a Middle East Nuclear Weapons Free Zone. This would require Israel, who is a member of the IAEA, to give up its nuclear weapons. Israel has joined the consensus and supported the concept of the Nuclear Weapon Free Zones rather than Non-proliferation Treaty, as appropriate vehicle for denuclearization in the Middle East. However, Israel has refused to begin negotiations towards creation of Nuclear Weapons Free Zones until a just and comprehensive peace is established between Israeli and Palestinian people as well as

⁸¹ National Intelligence Estimate, “Iran: Nuclear Intentions and capabilities”, November 2007, p.6.

⁸² Dan Williams, Israel braces for Iran bomb despite vow to prevent, Reuters, 15 november 2007

neighboring states. Another complicating fact to the already complicated situation is that most of the countries in the Middle East possess chemical and biological weapons. In 1990, President Mubarak proposed a Weapons of Mass Destruction Free Zone in order to get rid of all three kinds of weapons of mass destruction.

The main criticism always addressed when Israel enters in the game, is that US policy is maintaining unfair double standard policy regarding Israel and other countries in the region and worldwide. Of course, the double standard is inherent in the NPT itself, and it seems that the NPT weapons states have no intention of completely eliminating their nuclear weapons in the current international environment.⁸³

⁸³ Deutch, J. "A nuclear posture for today", *Foreign affairs*, 84 (1), pages 49-60, this particular reference p.51

X. Building restraints, reducing risk - CTBT as a means for nuclear non-proliferation and disarmament

The world is trying to find the solution to the nuclear question for quite a while. However, so far no single treaty prevented proliferation, spread of black markets with nuclear material or illicit trafficking of nuclear material. If beginner states are prevented from acquiring new and new nuclear weapons, at least that would be success. Of course, it would not reduce in any way nuclear weapons that states especially in the Middle East possess. However with hope that no serious conflict will emerge in the scene even their nuclear arsenal will at certain point “expire”. If Middle Easter countries furthermore adhere to CTBT – Comprehensive nuclear-test-ban-treaty, apart from Partial test-ban-treaty that doesn’t forbid all forms of testing nuclear weapons, we might see some progress in the regions. Countries simply have to start approaching the issue that apparently divides them with a matter that unites them. Many countries in the Middle East expressed their wish for nuclear-free-zone. CTBT might help in this case. Without testing, beginner states would not be able to develop sophisticated warheads, beyond crude nuclear explosive unlikely to be carried by missile. The first phase in developing nuclear weapons can of course be accomplished without testing. However, demonstrating new nuclear capability would not be permitted.⁸⁴ States are already in possession of advanced nuclear weapons might wish to develop, miniaturize and adapt their weapons to modern delivery vehicles and to develop warheads with new abilities. Without testing, their abilities would be substantially limited. The political disarmament effect of a test ban would even be stronger than technical consequences.

The two fold aim of the CTBT – non-proliferation and disarmament – seem inherently intertwined, as in the NPT, in the Fissile Material Cut-off Treaty, and in non-proliferation regime as a whole. Both directions of the CTBT are important and have to be complied with if we want to contribute to the international security.

⁸⁴ Garwin, R. , “can a proliferant state aquire nuclear weapons stockpile without testing?” , paper presented at a conference on Issues Surrounding US Congressional Ratification of the Comprehensive Test Ban Treaty, Cornell University, Ithaca, NY, 11-13 October.

XI. Conclusion

As mentioned in the introduction chapter, desire for nuclear capability to obtain “equal status” with nuclear powers, nuclear terrorism etc., one can state that “prospects of the global security environment slipping toward a nuclear ‘tipping point’ became more than theoretical possibility.”, according to Vartan Gregorian, 12th President of Carnegie Corporation. Another quote that in my view should be included is from Albert Einstein who maintained that “Discover of nuclear chain reactions need not bring about the destruction of mankind any more than did the discovery of matches.”

This is the point that many nuclear powers will become overwhelming and their choices irreversible. The case studies group suggests that a “group dynamic” may indeed play a role in nuclear decision making. Nuclear abstainers are likely to change their choices in the case they see own neighbors contributing to the proliferation due to security reasons. If their own national security is threatened they will definitely attempt to do everything possible to prevent the country from being destroyed. Another reason might be low penalties for acquiring nuclear weapons. This might be also strong incentive to work on the nuclear program. On the other hand if they judge that their neighbors will remain non- nuclear, they are likely to maintain status-quo. However, whatever the path countries take toward the tipping point, we appear still not to be there. Global non-proliferation regime in any case has to be strengthened as Ambassador Sanders pointed out correctly. We have to work on our future and ensure that the world in 20 years will be safe as well. Unfortunately, lately certain worrisome developments gave rise to the widespread concern that world of more and more nuclear powers is in fact inevitable. President Kennedy’s vision has only been postponed, not avoided as many would like to believe. Despite the global pessimism when nuclear weapons come into play, it is not that easy to reverse longstanding decision to renounce nuclear weapons. Each of the case studies greatly differ in their attitudes however on is common to all of them – security. Egypt has been long term proponent of the Middle East peace and weapons of mass destruction free nuclear zones. Saudi Arabia has also no significant reason to change its direction and shift completely to nuclear weapons option, other than being threatened to dissolve. Saudis could pursue their nuclear programs with the help of already skilled friends, such as Pakistan, North Korea etc. However they will only do so, if they are being threatened from Tehran. Saudis would not like to see Iran obtaining nuclear weapons and therefore present leadership in the region. Syrians would be able to cope with the fact that Iran would obtain nuclear weapons mainly due to great friendship that nations share. However in Syrian case as well, Syrian’s myth of their greatness and Pan-Arab leadership is really important to

them and it was states that Syria would be willing to pursue its nuclear program only based on the concern regarding prestige issue. Of course, everyone wants to be consulted and taken into account when decisions in his region are taking place. Middle Eastern solution lies in the peaceful and fair agreement in Israeli Palestinian conflict, establishment of peace treaties with Israel as soon as possible, greater religious tolerance and less of religious propaganda for public, and constructive and long term agreement of reducing the amount of weapons of mass destruction, including biological, chemical and nuclear weapons that virtually all countries have already developed potential to acquire or they may do so in a near future.

Despite the projection of Spiegel newspapers regarding Nuclear Middle East, I believe it is possible for all the nations to live in peace and harmony based on equality principles. States should also consider giving more power to international organizations that are attempting to have rather neutral stance on the issues going on, but still possess enormous amount of expertise that is needed not only in brokering peace agreements but also tailoring peaceful use of nuclear energy to each country's needs, of course without possibility to pursue military nuclear program in the shadow of their civilian program. Trust, transparency, open-mindedness and cooperation are the key words that should finally start to be applied in the Middle East as well; otherwise we will never witness any progress, only regress! And that is what we are trying to avoid – nuclear tipping point!

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