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The New Nuclear Reality

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A Strategy for Nuclear Security and Combating Nuclear Terrorism

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INTRODUCTION

Rule by terror is as old as human history. War has never been humane and is considered as inhuman. There is a difference between a liberation army and a terrorist group. The aim of liberation armies is to claim or reclaim rule with the wider support of the people, to liberate people. Those people who use terror to rule or attempt to rule against the will of people are terrorists. In their early years terrorists robbed banks and kidnapped people for ransom to obtain funds. They wanted to rule the world but they needed a huge amount of money to realize their projects, as the creation of the nuclear weapons cost a lot of money. They find harbor and support in countries such as Iran, Iraq, Lebanon, Libya, Pakistan, Sudan and Syria and often use forged or stolen passports to reach their target destinations. Terrorists have developed their networks and nowadays are trying to terror and rule the will of people all around the world. There is thought to be more than 500 terrorist networks operating around the world. The old-time terrorist cells of five to fifteen people have been replaced by groups with elaborate infrastructures that maybe state sponsored or have other financial resources which would allow them to engage in broad-scale nuclear terrorism. (Did You Know)

Every day there is an increasing terrorist nuclear threat. Terrorists are using plutonium, highly enriched uranium as well as other dangerous materials to make a nuclear bomb. (Landau, 63) Uranium is more attractive for terrorists rather than plutonium because it is much easier to purchase worldwide and plutonium has to be made in a nuclear reactor and uranium occurs naturally in the environment. There are many reasons why enriched uranium would hold appeal for terrorists. The low radioactivity of a uranium bomb permits it to be handled without protective gloves as well as makes it more difficult to be picked up by detection device. There are also other possibilities of purchasing a nuclear device. Terrorists

have connections on black markets, but sometimes they are stealing bombs as well. The results of such nuclear bombs after explosion are detrimental to both the population and land.

Such a wide topic as this one is indeed of my great interest, but I am well aware of the fact, that it is not possible to cover it all. I have just picked a few important points which should be remembered. I have divided my research paper topic into a number of chapters and subchapters. The structure of the research paper is based on the term terrorism, its history, and aspects. This research paper will also include the new nuclear reality as well as influence of Russia on nuclear weapon development. It is also important to mention every day increasing nuclear terrorist threat as well as the United States practises and policies in a war on terrorism. The second part of the research paper is about South Asian situation with a main focus on Pakistani situation where it is very important to mention some key figures, such as Dr. Abdul Quadeer Khan who was suspicious from espionage in Netherland's research laboratory. This topic became important after Pakistan tested its nuclear weapons in 1998 which means that people should concern about situation in Pakistan today.

DEFINITION OF TERRORISM

The word terrorism is not new, but it might be still hard to find a proper definition. Different institutions have defined it in different ways such as the United States Department of Defense defines terrorism as “the calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological.” (State Government) Within this definition, there are three key elements—violence, fear, and intimidation—and each element produce terror in its victims. The FBI uses this: "Terrorism is the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives."(State Government) The U.S. Department of State defines terrorism to be “premeditated politically-motivated violence perpetrated against non-combatant targets by sub-national groups or clandestine agents, usually intended to influence an audience.” (State Government)

In any case terrorism is a criminal act that influences an audience beyond the immediate victim. The main strategy of terrorists is to commit acts of violence that will get the attention of the local populace, the government as well as rest of the world. The terrorists are always planning their attacks and sometimes it might takes them couple of years. The effectiveness of the terrorist act lies not in the act itself, but in the public’s or government’s reaction to the act. The problem with terrorists is that they do not see themselves as evil. Actually they believe they are legitimate combatants, fighting for what they believe in, and in the case of Muslims in the name of Allah. On the other hand victims of a terrorist act see

terrorists as criminals whose actions might be considered as inhuman and immoral. Nowadays the view of terrorism as well as the behavior of terrorists has become an integral part of psychological science, which is trying to find the main reasons of their attitude in the history of terrorism as well as in the roots of terrorists` families. It is also focusing on the family background of terrorists.

HISTORY OF TERRORISM

Early History of Terrorism

History of terrorism dated its origins to the time of Zealots of Judea. They were known to the Romans as dangerous men who carried on an underground campaign of assassination of Roman occupation forces. Their motive was an uncompromising belief that they could not remain faithful to the dictates of Judaism while living as Roman subjects. Eventually, the Zealot revolt became open, and they were finally besieged and committed mass suicide at the fortification of Masada. (Terrorist Research)

The Assassins were the next group to show recognizable characteristics of terrorism, as we know it today. They adopted the tactic of assassination of enemy leaders because the cult's limited manpower prevented open combat. Their cult was based in the mountains of Northern Iran. Their tactic was sending a lone assassin to successfully kill a key enemy at the certain sacrifice of his own life. (Terrorist Research)

Both the Zealots and the Assassins are considered as the first forerunners of modern terrorism in the way of their motivation, organization as well as targeting and goals.

From the time of the Zealots and Assassins which means from the late 13th century to the 1700`s, terror and barbarism were widely used in wartime and other conflicts, but still the key elements of terrorism were lacking. (Terrorist Research)

The French Revolution provided the first uses of the words terrorist and terrorism. Use of the word terrorism began in 1795 in reference to the Reign of Terror initiated by the Revolutionary government. The agents of the Committee of Public Safety and the National Convention that enforced the policies of "The Terror" were referred to as "Terrorists".
(Terrorist Research)

The Modern Terrorism

Modern terrorism sprang from the unstable political and social climate of the 1960s when colonialism finally collapsed. During the late 19th century, radical political theories and improvements in weapons technology helped in the formation of small groups of revolutionaries who effectively attacked nation-states. During this time there was a trend of increasing tide of nationalism all over the world. Some nations saw opportunities to realize nationalist ambitions after they got their independence. Several of these groups chose terror as a method to conduct their struggle and to reach their goals. Anarchists believe in propaganda and were assassinating the heads of state from United States, Russia, France, Italy and Spain. Their lack of organization and refusal to cooperate with other social movements in political efforts caused to be anarchists ineffective as a political movement. The event that is considered the beginning of modern terrorism was the hijacking of one of Israel's El Al passenger jets in Rome on 23 July 1968 by the Popular Front for the Liberation of Palestine. (Jewish Virtual Library) Almost instantly after this event terrorists groups from around the world gained international attention.

Due to the events in first half of the twentieth the nature of present day conflicts has been developed. Every country feels unsecured and that is the main motion of countries to own nuclear weapons. The World War II practices influenced the view of people to use terror

and violations of the law of war. The violations already started during the World War I and it just increased during the Second World War. The Major powers as United States or Russia used terror tactics to support different organizations, which was viewed as acceptance of their legitimacy and civilians had become legitimate targets, despite any rules forbidding it. Throughout the Cold War, the Soviet Union provided direct and indirect assistance to revolutionary movements around the world and the revolutionary extremism of communism became attractive. Leaders of these "wars of national liberation" saw the advantage of free weapons and training as well as incensement of international legitimacy. Many of organizations and individuals started to practice terrorism in support of their economic, political and military objectives which also means that they started to employ violence and terror as the means to realize their ambitious. (Terrorist Research)

Nowadays the situation is alarming. Everywhere in the world there is a threat of Islamic extremists which brought everyday fear into our lives. The methods of terrorist's attacks have been changed so rapidly. There are many people willing to die because of their beliefs and ambitions. Islamic extremists introduced car bombs driven by suicidal drivers which they use against the neighboring countries as well as overseas. They are also using a small-motorized raft, packed with high explosives to attack their enemy. "Fifty-five years after the end of World War II, the United States is once again faced with the dilemma of devising a means of defending its citizens and national institutions against suicidal terrorist bombers." (Karmon) Suicidal attackers are very difficult to defend against because their own decision is to die in the attack and they are not even concerned with their escape or their chances of survival. The only thing they are concerned about is their ability to die gloriously. "To defeat terrorist suicidal terrorist attackers in the twenty-first Century, America must identify, target, and then destroy the individuals and organizations that are sponsoring terrorist attacks. The United States must be prepared to use all of its diplomatic skill in organizing

world trade or diplomatic sanctions against nations harboring terrorists. The United States must be willing to use military force when necessary to identify and destroy confirmed terrorist targets. The United States must convince leaders of major world religions to denounce religious sanctioning of any terrorist attacks. Specifically, the United States must convince leading Muslim clerics to issue a fatwa against terrorist suicidal attacks. If leading Moslem clerics denounce the use of suicide attacks, Islamic extremist's moral justifications of suicidal attacks, based on their own interpretation of the Koran, would be unusable.”

(Karmon) Nuclear, biological or chemical weapons pose an immense risk to civilian populations and therefore the United States must also be prepared for attacks using Weapons of Mass Destruction. The Department of Defense has created new military units called Weapons of Mass Destruction - Civil Support Teams. These teams are located in separate regions of the United States and it shows how concerned the United States is with the possible terrorist use of nuclear, biological, or chemical weapons. The United States has also trained local emergency medical services, fire departments, and police departments have little training in a case of terrorist's attacks. Unfortunately in a case of attacks many of these people will then themselves become victims of the nuclear, biological or chemical weapons. But still Weapons of Mass Destruction - Civil Support Teams are very positive beginning in preparation for combating nuclear, biological or chemical terrorist attacks. However, it is of critical importance that civilian emergency services' personnel receive proper training in responding to terrorist attacks that have used nuclear, biological, or chemical weapons.

(Karmon) In an effective war on terrorism national intelligence organizations must increase the use of human intelligence operatives. “In the past, national intelligence organizations have placed a heavy emphasis on electronic intelligence gathering techniques.” (Karmon) Using of such techniques is helpful as it is able to provide satellite pictures with the ability of looking at and listening to what terrorists may be attempting. But still there is a need of well educated,

skilled, trained and well prepared people who are willing to help with the history, language, and customs of many societies to prevent future attacks. These people must be able to understand terrorists, and must recognize their criminal actions in advance.

Very important step in preventing terrorism is to cut off their network of gaining finances. Terrorists groups might be supported by other terrorist groups, international organizations, individuals or are using grants received from governments of different countries which were provided for different purposes. Most of the time terrorists use low value but high volume fraud activity to fund their operations. Sometimes terrorist groups are using legitimate businesses such as hotels, pubs and taxi operators to launder money and fund political activities. It might be very hard for the United States to prevent such activities as most of the finances comes within the country borders. From my point of view it is nearly impossible to cut off all the networks of terrorists gaining finances. Nowadays terrorists networks are so huge and even if the United States will be successful in cutting of finances from abroad, terrorists will always find their way of gaining money within its own territory.

The New Nuclear Reality

The effects of a nuclear attack were experienced in Japan during World War II. The United States was the first country to develop a nuclear bomb in 1945 and dropped it over the two Japanese cities of Hiroshima and Nagasaki. The devastating results led for development of weapons of mass destruction as mentioned before. The second country to develop a nuclear bomb was the former Soviet Union in 1949. Both the United States and the Soviet Union built an increasing number of nuclear weapons and delivery systems. The rivalry and suspiciousness between those two countries and their allies resulted in a long period of war, called the Cold War which lasted almost fifty years. "During this time the United States spent

over four billion of American dollars to amass an enormous store of nuclear weapons.”

(Landau, 9-15)

Other countries did not want to stay behind this development and countries such as China, France, and Britain developed their own nuclear weapons. (Landau, 9-15) In 1974 there were first nuclear tests in India. “A few years later the United States intelligence found out that Israel was working on nuclear weaponry as well. Both India and Israel had experienced conflicts with surrounding nations who were also becoming interested in gaining the military advantages of being a nuclear powers.” (Landau, 9-15)

Past nuclear stability was threatened with the breakup of the Soviet Union in 1990. Weapons were in hands of newly independent countries which had lack of political and economic stability but still they became a nuclear powers. Even the countries population lived in poverty the new improvements in technology has made it easier to create nuclear arsenals because technologies developed for other purposes, such as lasers, but still it made building a nuclear weapon both easier and less expensive.

Couple of decades ago informations on building a nuclear bomb were secret. But today thank to the technology much of this informations are available today. The United States Intelligence is using a sattelites for monitoring terrorist areas and using the informations in a war on terrorism. According to book *The New Nuclear Reaity* written by Elaine Landau, “many libraries have a copy of the classic *Los Alamos Primer: First Lectures on How to Build an Atomic Bomb.*” (Landau, 12) Even if it is not a step by step manual it still provides a valuable informations on the physics of nuclear fission. The copy of this manual was also found in Iraqi bomb development library which makes clear that it was used by Saddam Hussein`s bomb development team. Nowadays there are no longer any secrets in atomic science and informations are also available to public through the internet or other official statements. Even if some countries are trying to work on their nuclear developments

secretly, there is still a way how to find out what is going on. As it is already mentioned, the United States intelligence is using satellites to monitor all dangerous areas. Therefore the international community has often had to rely on satellite information and intelligence sources to try to piece together a precise picture of a country's nuclear growth. (Landau, 13)

Nuclear developments have always depended on the government. In some cases a change in government might either speed up or slow down a work on nuclear projects. Every country feels unsecured and that is the main reason why many countries have a desire to own a nuclear bomb. It is accepted that nuclear weapons are safe and desirable but only when controlled by a responsible nation. Nowadays a threatening issue is that of nuclear weapons falling into the wrong hands which means falling into the hands of various terrorist groups. "There are many issues to deal with, but one thing is certain and it is containing the nuclear threat has never been more challenging, as the world comes to grips with the new nuclear reality.

Impacts on the New Nuclear Reality

The main impact on the new nuclear reality was definitely the collapse of the former Soviet Union in 1990. Russia officially took over the debt of the Soviet Union and decided to pay up this huge debt. Unfortunately the government in Russia was unable to pay it. The population of Russia lived in poverty after the split of the former Soviet Union. The government was not able to pay much of its workforce, including nuclear scientists, soldiers guarding nuclear cities, and many others involved in nuclear materials and weapons at varying levels. Army soldiers as well as civilians were short of everyday food so the Defence Ministry organized trips to the countryside during which army officers and soldiers were taken out to fields and forests to forage for nuts, berries, mushrooms and any other food supplies that could keep them alive

through winter. (Landau, 17) These Russian nature walks meant to leave nuclear facilities unguarded while gathering some food to keep them from starving in the months ahead. This event contributed to potentially high risk situation. According to Landau book, Russian government owed over hundredandseventy dollars to Russian ministry of atomic energy which was the reason why ministry was not able to pay its workers. Workers did not get their wages for couple of month which led to the temptation of selling nuclear materials or expertise to unauthorized outside sources. “The country was on the verge of a nuclear catastrophe.” (Landau, 18) This situation made no difficulties for the United States to be concerned about the Russian nuclear weapons. “Despite numerous attempts t arms reduction through the years, the nation still has over twenty thousand nuclear weapons housed in more than ninety installations through the country. Russia`s total arsenal includes thousand of small tactical nuclear weapons and six thousand two houndredfifty deployed long-range missile and bomber weapons.” (Landau, 19) Nowadays it is very hard to say what exactly Russia has in their hands and how many because of the situation after the fall of communism many of nuclear materials were stolen and sold abroad.

According to Landau`s book *The New Nuclear Reality* Russia has built an industrial complex of cities close to Siberia hidden far away from the country`s capital. These cities are consider to be secret and the places have only been referred to by a code names such as Chelyabinsk-65, Sverdlousk-45 or Krasnoyarsk-26. (Landau, 20) As an example Krasnoyarsk is one of the cities which are secret and where nuclear weapons are designed and manufactured. This city cannot be found on the map. People who live there were invited by government to live there, but they were not permitted to leave the place anymore or to contact their families outside the city. According to the book the city was there since the 1950 and it can be reached by a single rail line that runs through a number of dark twisting mountai tunnels. Its citizens are allowed to make calls within the city and of course these

communications were monitored by government. The main purpose of such cities was to produce quantities of nuclear materials and became more powerful than the United States. CIA was monitoring the place and found many informations about these cities. They knew that nuclear weapons were produced there because usually frozen Yenisei River was melted close to those cities. This meant that large quantities of hot water which was produced by nuclear reactors and plutonium were flowing into the river. These cities existed because the government wanted to produce their nuclear weapons and also the plutonium and highly enriched uranium necessary to create these weapons of mass destruction. Russian government recruited top nuclear scientists from different parts of the country to work on their nuclear projects. According to Landau book there were produced over forty tons of plutonium in Krasnoyarsk, which is enough to make ten thousand nuclear bombs.

At the beginning residents of these cities used to live quite luxurious lifestyle. Families lived in lovely residents and there was no food or clothing shortages. Government was providing free tickets to cities' theaters and opera. But later on after the collapse of the former Soviet Union everything has changed. People lost the support of the government and started to live in poverty.

During the Cold War there were three nuclear reactors in Russia and all of them were functioning at the full capacity to produce plutonium. After the Cold War one reactor was still actively manufacturing the deadly nuclear material. (Landau, 23) Besides producing plutonium this reactor is used to heat the city as well. "The reactors are connected to a gigantic boiler room about the length of two football fields that furnishes steam to a system of above-ground pipes running throughout the city." (Landau, 23)

In the late 90s thousands of nuclear scientists and military officers were seriously underpaid and increasingly underpaid which led to the nuclear business with other countries or individuals. This situation created advantages for countries such as Iran, Iraq and other

countries to gain their own nuclear weapons arsenals. It was very easy to access the Russia and to take control over nuclear materials. Terrorist groups could easily break into the inadequately secured Russian nuclear warehouses and steal enough uranium and plutonium for a small arsenal of nuclear weapons. It is well known that Iraqi leader Saddam Hussein sent his officials to Russia to look into purchasing nuclear materials and nuclear weapon delivery systems which brings us to the conclusion that Iraq is using Russian nuclear weapons and for sure there are some more countries such as Iran or North Korea who are also using stolen Russian nuclear weapons and other dangerous materials. The United States Central Intelligence Agency known as CIA also found that there is missing a number of gyroscopes which are the core of military missile's guidance system. (Landau, 24)

All these facts makes it very difficult to account how much nuclear material is still in Russia, how much materials is missing and which countries are using those nuclear materials. We do not even know how many of Russian officials were involved in disappearing of those materials from Russia. The Washington is well aware that Russian's problems brought the United States as well as the rest of the world to fear.

So far many arrangements have been done. The Cooperative Threat Reduction program known as CTR has been designed to deal with the Cold War's dangerous nuclear legacy. CTR has achieved a great deal when the former Soviet Union republics of Ukraine, Belarus and Kazakhstan have turned over all their nuclear weapons to Russian which means they are no longer nuclear states. Of course the United States was trying for other Russian-based nuclear safety programs often called the Second Line of Defence. The main goal was to help Russia to stop the theft of nuclear material and technology from its facilities. Russia and the United States were working on arms reduction treaties such as first and second Strategic Arms Reduction Treaties known as START I and START II which aim was to dramatically reduce the number of long-range nuclear weapons in both countries' arsenals. Unfortunately,

nowadays people can see its lack of action caused by the overall erosion of much of the good will between the United States and Russia that existed in the early 90s. (Landau, 34)

Today there is a wonderful period of hope that nuclear weapons won't fall into the hands of other terrorist groups and the threat of possible nuclear attacks will be soon over.

THE TERRORIST THREAT

The old time terrorist cells of five to fifteen people have been replaced by groups with elaborate infrastructures that are state sponsored or have any other financial resources which allow them to engage in broad scale nuclear terrorism. Terrorist groups often use services of talented nuclear physicists from all around the world. They use very sophisticated system for constructing a bomb which makes sometimes quite hard to detect plutonium. Terrorists prefer more to use high enriched uranium rather than plutonium because plutonium can contain other plutonium isotopes which make it hard to work with. There are other reasons why enriched uranium would hold appeal for terrorists. The low radioactivity of a uranium bomb permits it to be handled without protective gloves as well as makes it more difficult to be picked up by detection device. The other reason is that it is also easier than plutonium to purchase worldwide. Nowadays nuclear materials are more available than in the past because there is also a possibility of purchasing nuclear materials and devices on the black market. There is also a threat that conventional bombs will be replaced with radioactive material. Spread throughout an area by the explosion, the results would be detrimental to both the population and land.

The increasing terrorist nuclear threat has called for a stepped-up the United State response on various levels. In 1995 Congress passed the Comprehensive Antiterrorism Act which provides criminal penalties for any American citizen who illegally obtains nuclear

material. (Landau, 94) The Nuclear Emergency Search Team was also established whose members include physicists, engineers, technicians and others from various nuclear laboratories. If there is a nuclear bomb threat or a tip that a nuclear bomb is set to explode The Nuclear Emergency Search Team would be called to locate the device, identify its strength and disable it. Operators working for The Nuclear Emergency Search Team are trained to perform a number of different tasks depending on their skills. They are trying to build bomb in their laboratories which is part of the training because the idea behind this is to exercise and to learn the various ways these devices can be put together so that in an emergency they could be quickly and safely dismantled.

Much of the actual bomb search conducted by The Nuclear Emergency Search Team would be done in minivans outfitted with detection devices capable of pinpointing a nuclear bomb. Search team members are also working on foot, carrying radiation detectors small enough to fit into a briefcase or backpack. Presently The Nuclear Emergency Search Team does not operate outside of the country, but some feel it might be called upon to do so in a near future. (Landau, 97)

POLICIES AND PRACTICES

In a rapidly changing nuclear world there has been an ongoing debate about the role of the United States should take. It met with many different opinions and views. Some feel that the United States should concentrate more on its own defenses against a possible nuclear attack from a terrorist group. This view spread very quickly mainly after the 11th September, 2001 attacks. Many politicians as well as citizens feel unsecured. Others believe that it is more important to focus their attention on nuclear disarmament efforts. "They insist that the fewer nuclear weapons in the world, the less chance for an attack or accident." (Landau, 98)

“Recently a great deal of emphasis has been placed on developing and deploying a national missile system in which a defensive missile can track and destroy an incoming missile. This system is based on hit to kill principle” (Landau, 98) which means that a missile is set up to hit and then completely destroy the incoming missile before its possibility to reach its targeted. In 1996 The Comprehensive Nuclear-Test-Ban Treaty known as well as CTBT was established and signed by seventy one States. Nowadas it has been signed by hundredseventyseven states and ratified by hundredthirtyeight and still continuing the ratification of the treaty by all the states of Europe. India and Pakistan are defined by the Nuclear Nonproliferation Treaty as not being a nuclear weapon states and that is the reason why they did not sign CTBT. (Wikipedia)

The United States should focus their policy more on war on terrorism. First of all the United States should ensure nuclear weapons do not fall into the wrong hands which means hands of terrorist groups. It should also focus more on preventing future disputes between countries all around the world because if there want be any disputes there won`t be the reason for using a nuclear material. Veiry important is also encouraging countries to build confidence, because trust is the fundamental key in building a good relationshis between people as well as countries.

SOUTH ASIA

Everthing started one morning in May 1998. The United States intelligence sources received satellite photos showing nuclear blast in South Asia and seismograph registered a tremendous rumble in the ground which meant only one thing, and that there had been a nuclear explosion. Later on two South Asian countries Pakistan and India claimed that they were testing their nuclear bombs. According to the Landau book India detonated three bombs,

equaling about double the explosive force of the bomb dropped on Japanese cities Hiroshima and Nagasaki during the World War II. This event caused that government of the United States and especially America's intelligence sources were criticized that they were not able to find out what is going on in India and they made India able to catch the United States capability and that they did not have any clue about India's nuclear test plans in advance. (Landau, 61) People knew that if Washington would have information, the United States might have been able to stop it.

As a respond to the criticism White House claimed that the Clinton's administration spent so much time on monitoring and preventing a nuclear buildup in countries such as Iraq, Iran, and Libya and they did not expect that South Asian countries could be equally serious threats and that was the main reason why it just happened. The same events took place when Pakistan was testing its nuclear weapon.

Indias Reasons for Nuclear Weapon

In the past India refused to sign the 1968 Nuclear Nonproliferation Treaty which is an agreement through which nonnuclear countries promise not to develop nuclear weapons. According to this treaty five major nuclear powers the United States, Great Britain, France, China and Russia will reduce and eventually disarm their nuclear arsenals, but there is no timetable or deadline to which it is due. Later on India did not sign the 1996 Comprehensive Test-Ban Treaty known as CTBT which prohibits nuclear testing. "India argued that the treaties would only be fair if the large nuclear nations took tangible steps totally destroy their arsenals." (Landau, 62)

In the past India was against nuclear weapons. Its leaders knew that the world would be much safer if there were no nuclear weapons. Nowadays India feels unsecured and feels

that the existence of nuclear weapons drastically alters the nature of national security everywhere. That was one of many reasons why they wanted to possess their own nuclear bomb. They also believe that the security interests of all nations are equally legitimate and that gives India the right to have nuclear weapons for its own protection.

When in 1947 British India was divided into two parts and two new nation states Pakistan and India have been created India lost its strategic geographical position because then Pakistan became the country with the best strategic position in South Asian region. India's relationships with Pakistan became so complicated. They had a serious dispute over the control of Kashmir, a mostly Muslim region situated at the northern end of India-Pakistan border, which is still very actual even today. Currently the territory is divided between those two countries with a Line of Control. However there is hardly seen a political calm in this region. This negative relation has influenced India as well because Indians do not enjoy the sense of security and harmony as other nations do. Since their split in 1947 India has been three times in a war with this Muslim state. The various conflicts between India and Pakistan especially the one over the Kashmir predates the acquisition of nuclear weapons by either country.

The other factor which influenced India was fear from Chinese invasion. In 1962 these two countries fought a border war. China occupied a part of Ladakh which was a part of India's Kashmir area and wanted not only this northwest Kashmir but eastern sector of the region as well. Of course India deemed these parts as its own territory. That time China was a nuclear power and military giant that successfully invaded India and Indians have never forgotten their defeat and are afraid that it might happen again. As Chinese army is much bigger they decided to build the nuclear weapons which might protect them in a case China would try to invade them again. China also began its first nuclear weapon tests in 1964 which was as well one of the motivations for India to start seeking its own weapons capability. (Global Security)

PAKISTANI SITUATION

Historical Background

Since the dawn of civilization modern day Pakistan has been an integral part of India. The Indus River valley, which is now in Pakistan, was the center place where ancient Indian civilization was founded. Indians spread through the plain of the Ganges into the southern part of India. (Sublette) That time territory of Pakistan has also been the principal corridor into India from Mediterranean and Central Asian world. Later on Islamic empires invaded Central Asia and ruled northwestern India through the Pakistani corridor. Basically that is the way how Muslims get into India's territory, remained there and became an integral part of Indian society. (Britannica)

India was always divided into number of separate states throughout its history which became first time and the only time unified under the British East India Company in the eighteenth Century. (Sublette) The main purpose of this British Company was a free trade between member states such as Great Britain, India and many others. From mid nineteenth Century India was colonized by the United Kingdom but after three decades struggle for independence it became in 1947 a modern nation state. This struggle for independence resulted with an independence for India ending with the creation of Pakistan. (Britannica)

The origin of the Pakistan is quite recent. It arose after World War II. Muhammad Ali Jinnah has been considered as a founder of Pakistan, many people called him Father of the Nation as well. Jinnah was Muslim politician and leader of the All Indian Muslim League who was fighting for political rights of Muslims in India. Indian leaders were strongly against him and that was the main reason why he was driven out of India. (Mongabay) Jinnah went to

London where he spent couple of years and later in 1934 he came back to India. In 1946 there were elections in India and the Muslim League won the most seats in the elections. From that moment Jinnah began his direct action campaign to achieve Pakistan which of course caused communal violence across India. One year after the elections took place British India has been divided into the modern states of India and Pakistan. Nowadays many people came to the conclusion that this partition might be the key driving force behind the nuclear competition that now exists between India and Pakistan. This division split apart a region which had been united for millennia. This division also brought a long lasting dispute over the control of Kashmir which was already mentioned in this research paper.

Kashmir Dispute

As a part of independence process British India was divided into modern state of India and Pakistan. Shortly after this division Pakistan demanded Kashmir to be a part of it. One year later in 1948 tribesmen from Pakistan invaded Kashmir with the full support of Pakistani government. Hindu ruler of Kashmir asked India for help. India demanded that Kashmir should accede to it first and sent forces into Kashmir area, but invasion was blocked and Kashmir was divided into a Pakistan controlled part and into Indian controlled part. This division continues until now with the dividing line known as the Line of Control. (Institute for Energy)

The same year, 1948 India brought the Kashmir dispute to the United Nation Security Council. The resolution of the Council was calling on Pakistan to do secure withdrawal of its citizens. The suggestion was also to ask people living in Kashmir in referendum, that time known as plebiscite to determine their wishes. Unfortunately, neither force withdraws nor referendum has taken place. (Institute for Energy)

In 1965 India and Pakistan were in war. They fight a border war along west India-Pakistan border and Line of Control in Kashmir. The United Nation's recommendation was to cease fire so they did it. (Institute for Energy)

Later on during 1970 and 1971 an important event took place. That time Pakistan was divided into Western and Eastern Pakistan. The elections took place and the results were in overall majority for an Eastern Pakistani party which was ethnically mainly Bengali. East Pakistan, now known as Bangladesh demanded autonomy and independence from brutal repression by Pakistani military. And that is how the war known as Bangladesh war started. About ten million refugees steamed into India from Eastern Pakistan. (Institute for Energy) Pakistan attacked airfields in India and Indian controlled Kashmir. India stroked back. The United States knew that Pakistan would probably loose this war but still Nixon's administration is trying to help Pakistan sending nuclear-armed aircraft carrier and its battle group to the region as an implicit threat to India. This event influenced nuclear politics of India in favor of nuclear testing. In this war Pakistan is loosing a part of its territory and Bangladesh is becoming independent state. (Institute for Energy)

After the war in 1972 India and Pakistan signed a peaceful contract known as Simla, according to which both sides agree to settle their differences by peaceful means through negotiations or any other peaceful means mutually agreed between them. (Institute for Energy) Both India and Pakistan agreed to solve Kashmir dispute mutually and as soon as possible but actually it never happened. The Simla agreement also contained the means of exchanging the troops of both countries who were imprisoned during the Bangladesh war.

During the 80s and 90s violence in South Asia intensifies. Islamic militants from outside the region with full support of Pakistani government carry out ethnic cleansing in Kashmir Valley. They are terrorizing non-Muslims causing large number of people to flee

from the country. There is also a strong pressure of border infiltration from Pakistani side which brought serious Human Rights abuses.

Nowadays in the twenty-first Century violations still continue as well as the fundamental Human Rights violations. But there is a lot of hope for resolving of the disputes between India and Pakistan. Even Pakistani president Musharraf has an optimistic view about an old decade's dispute with India over Kashmir promoting the hope that these two countries are focusing on negotiating and resolving of this dispute by using a peaceful means rather than confronting each other.

Origin of Pakistan's Nuclear Weapon Program

In 1956 Pakistan established Pakistan Atomic Energy Commission known as well as PAEC. (Sublette) The main purpose of establishing such a commission was that Pakistan can participate in Atoms for Peace program which was first announced by the United States president Eisenhower. But some individuals like future Pakistani Prime Minister Bhutto started to develop a nuclear weapon program under the cover of Pakistan Atomic Energy Commission, but the development was as slow as Bhutto did not have enough power. Basically they started to work on a weapon design even before the start of work on uranium enrichment. Of course they did everything under the auspices of the PAEC.

The United States was the main supporter of Pakistan. In 1960 the United States gave three hundred-fifty thousand American Dollars grant to help Pakistan to prepare for the first research reactor which the United States also agreed to provide. In the same year Pakistani government was sending young men abroad to study there, get degree, experiences and good training to start their own nuclear weapon program. Two years later in 1962 the United States supplied Pakistan with the first Pakistan Atomic Research Reactor known as PART-1 which

begun operation in 1965 at Pinstech in Nilore. It was a five mega watts light-water research reactor. (Sublette)

In 1964 India with its most politically prominent scientists started its nuclear weapon program. Of course Pakistan had a clue about the situation in India and they knew what is going on down there. It became a great concern of Pakistani president Khan and his foreign minister Bhutto.

Couple of years later in 1971 the Canadian General Electric Company completed a hundred thirty-seven mega watt CANDU power reactor for Pakistani Karachi Nuclear Power Plant known as KANUPP which began commercial operation in October 1972. (Sublette) The Canadians also provided a small heavy water production facility. The facilities were under the International Atomic Energy Agency safeguards. The main aim of Pakistani government nuclear weapon program was to use plutonium from its reactor as a key material or ingredient in their nuclear arsenals. But to do so Pakistan required some means of separating plutonium from spent fuel. The British Nuclear Fuels Limited company helped Pakistan to prepare studies and designs for pilot plutonium separation facilities. (Sublette) It designs facility capable of separating up to three hundred sixty grams of fuel a year. The centerpiece of Pakistan's nuclear weapon program at that time was the effort to acquire a reprocessing plant to separate plutonium from the fuel of the Karachi Nuclear Power Plant. Its capability was two hundred kilos of weapons grade plutonium a year, but of course only if sufficient fuel were available to feed it. (Sublette)

Pakistan had another problem. They did not have any weapons and they really needed them. Prime Minister Zulfikar Ali Bhutto made an effort on Democratic People's Republic of Korea to obtain critically needed weapons. The first shipment from North Korea was made in 1971. This cooperation or weapon business helped to create good relations with Korea.

On the 24 January 1972 there was a secret meeting in Mutan whose leader was Prime Minister Bhutto who was concentrating all the power in his hands. His desire was to acquiring nuclear weapons. During this occasion Bhutto brought together scientists who were in charge of nuclear weapon program. (Sublette)

In 1974 India made its first nuclear tests, which was a good challenge for Pakistan. Pakistan started to feel unsecured and they wanted to find some new ways of protecting themselves from India's threat. The best way was to respond to them the same way and that was the main reason why Pakistan was focusing more on the development of nuclear weapons. Pakistan began recruiting the top scientists from all around the world. One of the main and most important people was Dr. Abdul Quadeer Khan. In the same year PAEC chairman Munir Ahmad Khan called a meeting to initiate work on an atomic bomb where the top scientists met. Actually the word bomb was never used during the meeting, but still everybody could exactly understand the right objective of the meeting. The main task for the scientists was to prepare and develop the design of weapon implosion system. The project was located at Wah, in the Northwest Frontier Province close to the capital city Islamabad. (Sublette) The group of people working on the project was named The Wah Group and their work was limited to research and development of the explosive lenses to be used in the nuclear device. This expanded however to include chemical, mechanical and precision engineering of the system and the triggering mechanism.

Dr. Abdul Quadeer Khan

Dr. Abdul Quadeer Khan was a German-educated Pakistani metallurgist who is considered as a main source of Pakistani's nuclear arsenal as well as father of Pakistani nuclear arsenal. He provided his assistance for the uranium enrichment process but actually

never became the overall leader of the Pakistani nuclear program as well as he was not in charge of the development and testing of Pakistani's nuclear weapons. (Global Security)

During 1972-1975 Khan was working for Physical Dynamics Research Laboratory known as PDR in Amsterdam, Netherlands. (Sublette) He left his place and went back to Pakistan in 1976 where he started to work for Pakistan Atomic Energy Commission whose chairman that time was Munir Ahmad Khan. He received the full support of Pakistani Prime Minister Bhutto who also gave him the autonomous control over the uranium enrichment project. It is clear to everyone that this process would have been beyond Pakistan's means if they won't recruit Khan into this huge project. The only responsibility Dr. Khan had was to report directly to Prime Minister Bhutto.

In July 1976 Khan founded Engineering Research Laboratory which was later named Khan Research Laboratory also using the shortcut KRL or ERL. (Sublette) The focal point of this laboratory was development of uranium enriched capability with the exclusive task of indigenous development of uranium enrichment plant. Khan Research Laboratory was also the place where the first centrifuges construction begun their operations in Pakistan. This laboratory had very close ties with Pakistani military as well as the full support of the Prime Minister Bhutto and the government.

As the development was so rapid, suspicious fell on Khan's activities in URENCO which is a uranium enrichment plant in Germany, Netherlands, and the United Kingdom which supplies nuclear power to about fifteen countries in Europe and overseas. (Sublette) It is well known for people that Pakistan had built good relations with China because of their endeavor to invade India and that was the reason why Pakistan allowed Chinese technicians to enter the Khan's Research Laboratory.

As it was mentioned before the suspicious fell on Khan's activities and in 1983 he was convicted of espionage and sentenced for four years in prison by court in Amsterdam for his

activities in URENCO. In front of the court Khan claimed that the development was so, rapid because it was a result of Pakistan's innovation process and its never ending struggle and not the case of any espionage. (Sublette)

Later on in 1987 Khan had confirmed Pakistan's acquisition of nuclear weapons development capability. As the Prime Minister Bhutto and the whole government were strongly against his confirmation, Khan denied it, but later on in 1991 he repeated his claim again. (Sublette)

The United States of America wanted to stop their economic and military aid to Pakistan in 1990, and the government knew that without the United States support won't be able to continue its program. This was a good motion for Pakistani government to agree to freeze its nuclear weapon development program. Of course they did not want to do it so the easiest way was just to say we stopped it even if they did not do it. The main actor in this situation became again Dr. Khan who officially claimed that the program was never stopped.

Dr. Abdul Quadeer Khan did many positive things for Pakistan's government, but unfortunately he did many negative things as well. For example the serious suspicious fell on Khan again that he is selling nuclear know-how to Iraq. In 2003 Iran claimed that there was a business with Pakistan and Pakistan wanted to sell those nuclear weapons technology to Iran. The United States of America took a step in investigations. The 2004 investigations reported that Khan provided unauthorized technical assistance to Iran's nuclear program and Khan was dismissed from his post as the science adviser to the Bhutto's government. Currently Khan is kept under the house arrest which means he is not allowed to leave his house without any guard and his phone line is monitored.

Main Pakistan's Suppliers

As it was already motioned in this research paper the Democratic People's Republic of Korea provided a shipment of critically needed weapons to Pakistan. Netherlands has been providing Pakistan with different components needed for centrifuge constructions. Switzerland and Germany have been involved in a business with Pakistan as well. Switzerland was providing high vacuum valves and Germany vacuum pumps need for the construction of the nuclear weapons. China and North Korea were supplying Pakistan with nuclear and ballistic missiles and specialized magnets for use in the uranium enrichment equipment. On the other hand it is well known to the United States intelligence sources that Saudi Arabia is providing a huge financial support to the Pakistan. (International Institute)

Black Markets

Dr. Abdul Quadeer Khan has been a leading person in Pakistan's development of nuclear weapon program. During his action in Pakistani nuclear weapon program he has developed a huge and secret network with Iran, Iraq, North Korea, Libya, Malaysia and other countries. (International Institute) Unfortunately, the United States intelligence sources are not well informed about the exact black market networks which have been developed by Khan. It is only known for them that Malaysia is providing a space for manufacturing of centrifuge components. There were set or established many companies manufacturing centrifuges in Malaysia with an aid of South Asian and German middlemen. Some European companies are involved in black marketing as well such as Dutch companies which provide their services in exporting the centrifuges from Malaysian's manufactures to Pakistan.

Dr. Khan had many different motivation factors for the proliferation act of nuclear weapons. First of all it was driven by his desire for security of Pakistan as well as he wanted to create his own wealth and wanted to become famous and important figure in the history of Pakistan's nuclear weapon development. Secondly he was Muslim and he had desire to give nuclear technology to all Muslim nations and that was the reason for setting a secret network with other Islamic nations such as Iran and Iraq.

Pakistan and the United States

It has been well known for a long period of time that the United States are sympathizing more with Pakistan than India. The United States provided its support to Pakistan in 1972 when Pakistan was involved in Bangladesh war. (Institute for Energy) Pakistan and the United States became allies again in 2001 when Pakistan provided its support to the United States in the war in Afghanistan. The main goal of these two countries from two different continents is to campaign against terrorist group Al-Qaeda and of course the aim is to continue a war on terrorism as well. We all know that the United States provided, still provides and will continue to provide its economic and military aid to Pakistan.

Even if the United States are on Pakistan's side they should first of all stop the infiltration from Pakistan into Indian controlled part of Kashmir which is resulting in terrorism and violence there. Secondly the United States should stop all forms of human rights violations by militants. They should also encourage Pakistan to resolve the Kashmir issue peacefully, keeping in mind the legacy of partition and ground realities at present namely the existence of the Line of Control between Indian controlled part and Pakistani controlled part as a virtual boundary since the Simla Agreement of 1972. Another step is to identify a process for ascertaining the wishes of the people of Kashmir regarding their future. US should also try

to defuse nuclear tension between India and Pakistan and eliminate the risk of nuclear war.

Another important step to be achieved is to open up the two countries to normal movement of people and trade and create climate, socially and politically that would promote good relations especially between the people of India and Pakistan.

The United States should also ensure that nuclear weapons do not fall into the wrong hands, the hands of terrorists groups. They should prevent the disputes between India and Pakistan as well as to encourage India-Pakistan nuclear confidence building. If these two countries would trust each other that should be a good signal for the peace in this part of South Asian region.

Terrorism in Pakistan

Due to the Soviet invasion of Afghanistan in 1979 subsequent war against the communism developed and continued for at least a decade. The war brought numerous fighters from all over the world to South Asia. They were known as mujahideen and they created havoc in Pakistan by carrying out terrorist activities inside the countries which were continuing even after the war officially ended. Controversial Islamic policies of General Muhammad Zia ul-Haq gave power to various religious figures in the country that in turn spread intolerant religious dogmas among the masses which brought the violence plaguing the whole country. (Wikipedia)

There have been many secessionists movement within Pakistan. After the Bangladesh liberation war in 1971 liberation movement of Baluchistan gained momentum whose army is still active even today in its efforts to achieve independence by attacks on both civilian and military targets. They are filming their attacks and are making them available on the internet, apparently for propaganda purposes. (Wikipedia)

According to the source in 1987, ninety percent of all reported terrorists activities worldwide were located in Pakistan. (Wikipedia) The reason might be that Pakistan is one of the countries with the highest Islamic population in the world with diverse cultures, languages, traditions and customs. The different cultures in Pakistan are promoting very different ideologies, further encouraging regionalism. (Wikipedia)

Nowadays there is a presence of many unregulated typical Islamic schools called madrassas all around the Pakistan which contribute significantly to terrorism problem in this area. Most of the financial support to madrassas came from terrorists and not from government. There is some small number of madrassas who are supposed to provide military training which give inspiration to European extremists of South Asian descent. It is believed that people who carried out bombings on London in July 2005 were members or at least had some experiences with madrassas at some time in their life. Of course government tried to deny that Pakistani people had to do something with these attacks. Pakistani president Pervez Musharraf said that it does not mean when someone visited Pakistan once he is Pakistani or was in charge of terrorist activities in Pakistan.

Intelligence agencies around the world have long suspected Pakistan as the source of extremism and terrorism. It is also very well known for intelligence sources that there are several terrorist groups in Pakistan which set their bases there. There is Pakistan based terrorist group named Lashkar-e-Toiba which is trying to bring all religious extremist groups together and cooperate together against civil democratic movement in Pakistan. (Wikipedia) Another important terrorist group is Sipah-e-Sahaba Pakistan which is responsible for many attacks on Shiites which is an Islamic political movement. (Wikipedia) Also a very well known terrorist organization is Lashkar-e-Omar which has been accused from attack on a church in Bhawalpur in Punjab as well as on a church in the heavily guarded diplomatic enclave in Islamabad. (Wikipedia) This organization was also involved in the suicide

bombing outside the Sheraton Hotel in Karachi. In all cases many people died or had been injured.

CONCLUSION

Terrorism has its long history, the first sights of terror rule came with the wars. People who were using terror to rule or attempt to rule against the will of people became known as terrorists. The old time terror has been changed through the decades and developed into the really serious terrorism which brought people all around the world under the threat of various terrorist groups. The main strategy of terrorists is to commit acts of violence that will get the attention of the local populace, the government as well as rest of the world. Every day there is increasing terrorist nuclear threat as terrorist groups are working on developing a nuclear bomb or trying to purchase it from different sources. The results of such nuclear bombs after explosion are detrimental to both the population and land.

The improvements in weapon technology after collapse of colonialism highly contributed to establishing of modern terrorism. Every country started to feel unsecured and that feeling became the main motion of countries to own nuclear weapons. Many countries were working on their own nuclear weapon programs, they built their own weapon arsenal and became nuclear powers. This is the case of some South Asian countries such as India and Pakistan.

After India's struggle for independence British India was divided into two parts and new modern states India and Pakistan were created. This partition meant a lot for India. First of all, the partition divided country, which was unified for millennia. Another important issue was, that India lost its strategic position in South Asian region as Pakistan's territory before the division used to be the principal corridor into India from Mediterranean and other South Asian countries. After the partition Pakistan became more important because of its strategic position and became very attractive for the United States who wanted to create good relations with Pakistan and get to the region. The ally like Pakistan gave the United States the

possibility of an exceptional position for their troops in war against terrorism. The United States used this position in a war against Afghanistan as well as Iraq. India was not any more attractive to the United States and felt unsecured from its neighbors like Pakistan and specially China which is one of the military powers in the world. Both Pakistan and China fight a border war with India and were trying to invade its territory. All these events have contributed to India to become a nuclear state with its own nuclear weapon arsenal.

Unlike other countries, Pakistan is a country with nuclear weapon and was found in an investigation that it was selling its weapon and technology to Iran, Libya and North Korea. Preventing Pakistan's nuclear weapons and technology should be a top priority of the United States. Revelation about devastating impact of Dr. Abdul Quadeer Khan's proliferation network should bring the main focus of Washington specifically on nuclear safety and security cooperation and encouraging India-Pakistan dialogue that will improve Pakistan a regional security perception. If Pakistan would feel secure, and India would give up its nuclear development then maybe the Pakistan will do the same. Washington should maintain its partnership with Pakistan on mutual trust and understanding and try to stop nuclear threat. Very important step of the United States should be the integration of various components of its policy toward Pakistan. In other words they should focus on pursuing nuclear security, safety and nonproliferation in Pakistan as well as shutting down the madrassas who are feeding terrorist groups. Very important should also be encouraging peaceful talks with India and pressing for steps toward democracy. These goals should be mutually reinforced and should encourage the country, Pakistan toward a stable and moderate pathway.

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