

Evolution of the Nuclear Deterrence Principle (Abstract)

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Tesi: Evoluzione del concetto di Deterrenza Nucleare

In this four-chapter based thesis, I would like to make an excursus about the historical evolution of Nuclear Deterrence, beginning at the end of the Second World War in 1945, throughout the Cold war years, arriving towards our century, where this principle has changed with the multiculturalism that has taken the place of the bipolarism.

In the introduction of the thesis, I introduce historically how a discover made by a famous Danish professor, Mr. Niels Bohr, who discovered the atoms in his molecular studies, made a great difference in researches and studies of physics as well as, involuntary, in the projects for future weaponry during the Second World War, as he was taken prisoner by the Nazi army in 1940 during the invasion of his home country, Denmark.

The thesis continue with the first section, where I tried to give some information about the different definitions of the principle of Deterrence, focusing, in particular, on the definition of Nuclear deterrence, which is the topic of the thesis and most important definition about it. I then gave some examples of deterrence during the Cold War and shown the three-step peculiar characteristics that nuclear deterrence must have in order to be considered by other states in this kind of policy mechanism.

In the next paragraph, my focus is on the weaponry that has been produced during the Cold War, and they're potential. I tried to determine a categorization between different nuclear weapons basing on the distance they could have reach, in first place, then based on the weight this nuclear weaponry had and, at last, on the system that states used to deliver the weapons on the target, considering also the territory factor, which is important the same as the vehicle itself.

In the second chapter, I try to follow the historical background of the conflict between the United States and The Soviet Union, which has brought out the principle of nuclear deterrence, which was only theoretical by then. Beginning with the defeated Germany, my excursus travels thought the rise of United States as a superpower in the Western section of the world, while the Soviet Union, who exits the war as a champion of the Eastern sector of the world as well as a superpower, impose herself as a model for eastern countries and, year after year, creates a strong relationship with those countries according to an anti-western policy, after the struggle with the United States over Berlin, whose position in politically in the middle of the two political divergent, superpowers. The struggle immediately becomes a fight between the two antagonist view of politics, the United States representing the capitalistic economic model, followed by European nation such as Great Britain, France and the Western sector of Germany (with K. Adenauer as chancellor), and the Union of the Soviet Socialists Republics (USSR) representing the socialist economic model, followed by socialist countries such as Czechoslovakia, Bulgaria, Hungary and all eastern countries including the eastern section of Germany (leded by W. J. Brandt, the secretary of the Deutsche Democratic Republic).

This continuous struggle between the two superpowers, together with relevant geopolitical events, such as the Berlin wall (erected in 1961), the crisis broke out in Prague and Budapest of 1958, all together brought a situation on political tension and started the phase of the Cold War.

The second paragraph of the second chapter, is, in fact, based on the Cold War, in which the escalation of the political and military violence led to an almost assured destruction (from the acronym used during this period MAD- Mutual Assured Destruction) because of the use, by both United States and Soviet Union of the Nuclear Weapon as a deterrent to obtain certain political measures or geopolitical influence on nation-states still not under the control of any economic zone.

With the third chapter, I analyze what has happened after the end of the Cold War, when nuclear structures were revealed to the public and all cold war secrets were now in the hands of new nation states formed after the struggle, who's objective is trying to reach the characteristics of the superpowers in economy as well as in military systems.

I'm analyzing three states for this section, which are India, Pakistan and North Korea, whose technology in the post-cold war led to produce, at the beginning, energy relying on nuclear reactors, and then started using the same source of energy to develop nuclear weaponry in order to increase their influence in the new multicultural world that was forming.

The chapter is divided in two paragraphs, because I tried to talk about this countries basing firstly on their geographical position (that is fundamental to understand how they got nuclear power plants and how they were able to develop it) and secondly, I tried to make an historical introduction about their access to the nuclear energy and after explain how it has influenced the country policies and has evolved in time.

As India and Pakistan are in the same area, the first paragraph combines these two countries, starting with India. India's nuclear energy's power plants were active in 1980, but the capability of building and finding vehicles able to carry nuclear weaponry is postponed in 1998, when India had detonated his first nuclear weapon. Initially fissile material was carried from the United Kingdom, strictly related to India, but after the independence of the country, the Indian government started projects about mining facilities and India got self-sufficient by the late 90's.

Pakistan was firstly joined with India, because of the region of the river Indo, were Indian people initially settled. After the independence at the end of the I World War, Pakistan begins a struggle to affirm itself in the new political scenario, even in contrast with the near India. Pakistani nuclear program started in 1972, with the knowledge of the Prime Minister Bhutto, who traded for nuclear power plants blueprints and materials.

Unlike India, Pakistan is a country where the resources of fissile materials are present in large quantities, and so the relation with other states for this kind of goods is rarely found in Pakistani policies, based more on materials for the power plants and scientists, researchers and nuclear physics, of which Pakistan lacks of. However, to get plutonium, that is necessary to build an atomic bomb, Pakistan relied on the help held by United Kingdom and Belgium.

Most of the international relations between Pakistan and other countries are in this direction, like negotiations with China during the years 1969-72. From the 1976, Pakistan regularly tested nuclear energy inside the power plants in order to produce fissile material, resulting in a success from the 1978, when the first test took place.

The second paragraph refers, instead, to the Korean peninsula, strongly forced by the Korean War that broke out in 1950, and after taken in consideration by both superpowers for their Asian influence in markets.

In particular, I focused on the North Korean's process of obtaining nuclear energy through power plants after the Cold War end.

After a brief introduction, where I explained the historical background that led to the division operated by the treaty of Genève (in 1954) on the 17th parallel, I made an excursus about the influence that Soviet Union and China, as they got a major role inside the socialist zone, had on the develop of North Korean's energy towards helps to reach the state of nuclear power.

Korean nuclear energy was first brought up by the help of Soviet Russia, which gave in 1965 the needs and the knowledge to build a nuclear power plant in Pyongyang. Only five years later North Korea was able to produce their own power plant and changed the place of the researches in Yongbyon. The capacity of mining enriched uranium and plutonium gave North Korea too much worldwide visibility, especially after the signing of the Non-Proliferation Treaty in 1980 together with China, United States and Soviet Russia.

Also, an international organization was born in those years, the IAEA (International Atomic Energy Association), which had the power to control over nation state's policies about nuclear energy.

But it was far too late as North Korea had constructed three more nuclear power plants well hidden in the north and center of the North Korea, and, as the main reason, well away from IAEA controls.

Only in 1994 the struggle between United States and North Korea were finally concluded with the Nuclear Activities Framework, who gave both sides advantages, especially for North Korea, whose technology was now supported by South Korea, America and China.

In all three cases of study which I analyzed, I tried not to give political reasons or positions, because of the fact that my work is only made to give an impression about how this countries, that not often are cases of study by history books, had changed their political prospective in order to maintain their independence from other states and in the meantime try to progress in the multicultural world that had been formed after the events that had gone from the end of the Second World War to the end of the Cold War, throughout the stabilizing period of the 90's.

Unlike the other three chapters, the fourth is structured not in a strict chronological chain of events, but mostly regarding the topic and its influence on the society which leads me to think that in the wrong hands, that specific tool could bring some serious problems on a political and sociological ground.

The fourth chapter gives an end to the historical progression because it gives examples of the new ways in which deterrence could be found in the XXI century, not only about nuclear weapons, but also considering how this principle had changed once again in today's world.

The main tools that I analyze in the last chapter are internet and bacteriological weapons. Both these tools, in their common use, do no harm to people, because internet has the ability to interconnect the world altogether at same time, while bacteria are used as a case of study to help

medical structures find new cures and vaccines to prevent the spreading or the contagion by people of maladies.

But the world that once was based on a bipolar structure, has now changed because of the introduction of new nation-states, whose economy and politics are now interconnected with the others countries, in international organizations.

From these premises, we have to consider how this changed affected the societies. On one side, the struggles that once took place in macro areas (such as struggles between continental states as Usa and Ussr), have changed now to a more specific, micro areas conflicts, which are less controllable and more dangerous because of the new discoveries and upgrades constantly made in the field of weaponry.

On the other side, the struggles are nowadays, not always brought forward by States' international policies, but also by small groups, often with terroristic purpose, that are able to handle technology and weaponry with consequences well beyond States control. In fact, states could use Deterrence as a politic weapon to reach objectives or deny other States' policies, and their action end up, as we can see in the Cold War period, with negotiation between each other and economic treaties.

Small groups of pression are not always controlled by states and this is the reason why is difficult to base a negotiation with them. Their use of the violence is the same of that of the states, but their reasons are different; also their weapons are different and, most of the times, they are not aware about the effects that could be caused by the detonation of those weapons.

These groups not only use these kind of devices, but also new tools of public disorder. I was talking before about internet and bacteria.

In the wrong hands, in a world, like ours, multicultural, connected and with common shares of goods, information and knowledge that relies on the internet factor, terroristic groups could block the stock market with a click or cause a pandemic breakout simply with a computer or a small laboratory.

In the conclusions, I pull the sums of this last chapter, together with the evolution of deterrence, necessary to understand, “Where we are at this point”.

In the evidence that multiculturalism has done a lot for countries’ cooperation and sharing, an interconnected world has also some flaws that need to be taken in consideration extra carefully.

In a matter of facts, religion is an important topic of debate between countries of Europe and Middle East because of structural differences in their government. As it is become so important, terroristic groups have proven to be sensible about this fact and the struggle become anti-Western revolution in the name of fundamentalist though.

As the struggle between religions has joined the struggle between models of economies, the multicultural world has to face not easy challenges in global governance, in the try to balance the foreign policies of nations.

My thesis ends with an advice: if nothing is done to seal the wounds that are existent inside the nations and between them, the Cold War period had teach us nothing. And we have to be aware of this, because new weaponry in development is maybe smaller, but extremely threatening, powerful.

A single conflict could mark the end of a civilization only by pressing a single button, maybe even on a laptop computer, not recognizable in a big city, where internet connects thousands of people.