

The background of the slide features a close-up of a globe showing the continents of Africa and Europe. In the foreground, a large, light-colored wooden chess piece, likely a king or queen, is partially visible on the left side. The overall lighting is soft, and the colors are muted, giving it a professional and academic feel.

ΚΕΔΙΣΑ ● KEDISA

ΚΕΝΤΡΟ ΔΙΕΘΝΩΝ ΣΤΡΑΤΗΓΙΚΩΝ ΑΝΑΛΥΣΕΩΝ
CENTER FOR INTERNATIONAL STRATEGIC ANALYSES

What is the current balance of nuclear weapons and how 'stable' is it in terms of deterrence?

Maria Galanaki

Research Paper No. 19

What is the current balance of nuclear weapons and how 'stable' is it in terms of deterrence?

Maria Galanaki

Analyst KEDISA

Research Paper No. 19

Board of Directors

Andreas Banoutsos, Founder and President

Dr. Spyros Plakoudas, Vice President

Omiros Tsapalos, Secretary General

Giorgos Protopapas, Executive Director

Argetta Malichoutsaki, Financial Officer

Dimitris Kiouisis, Member of BoD

Konstantinos Margaritou, Member of BoD

What is the current balance of nuclear weapons and how 'stable' is it in terms of deterrence?

In 1945, the world faced the first nuclear attack when Hiroshima and Nagasaki in Japan were bombed by the United States with an atomic bomb during the World War II (Demetriou 2015). The A- bomb killed thousands of people while caused serious health and genetic problems to the populations of the two cities and their descendants (Demetriou 2015). Additionally, nuclear weapons concerned the global scene later in the Cold War when the United States and the Soviet Union developed further their nuclear weapons' strategy and they reached to an escalation of their hostile relationship. Also, they adopted the deterrence theory that describes the threat of the use of nuclear weapons from a State A to a State B if the State A feels that is being under attack from the State B (Nuclear Age Peace Foundation 2011). Many theorists in the past and nowadays have adopted different theories about the use of nuclear weapons (e.g. realism and constructivism) while others condemn the states who adopt this war method because of the extermination of human beings that a possible nuclear attack would cost. Today, more and more countries have achieved to have access in nuclear weapons, trying to reinforce their security and show their power. In addition, a new actor in the global scene; terrorist organizations have brought concern regarding the expansion of nuclear weapons. Many experts express their thoughts about a possible use of nuclear weapons by non state actors and its consequences. Nowadays other crucial topics are: the belligerent relationship between the USA and N. Korea, two countries with nuclear weapons that could lead to an armed conflict, the nuclear programmes or Iran, Pakistan etc. and the possible creation of nuclear weapons by terrorist organizations.

This paper has its purpose to critically analyze what is the current balance of nuclear weapons and how stable this balance is in terms of deterrence. More specifically, firstly, it is going to be analyzed the definition of deterrence relating to the nuclear weapons. Secondly it will be underlined one theory that is related to the nuclear weapons; realism and its different categories, while we will try to connect them with examples from the past and the present. Thirdly, we will mention the current international treaties that have been signed between the states in order to control the proliferation of nuclear weapons. In addition, we will continue our analysis taking into consideration the current situation

in the global scene and giving notable examples such as the nuclear weapons in N. Korea and its relations with the USA, the possible possession of nuclear weapons by terrorist groups, the nuclear weapons of Iran etc. and how these examples show if there is a balance nowadays or not and if yes what this balance is. Furthermore, we are going to come to the conclusion that although the international community has achieved to make some steps in order to create a balanced nuclear system, the dominance of the states and the absence of a strong legislation regarding the nuclear weapons have brought into surface instability.

To begin with, it is of high importance to mention that nuclear weapons are the most dangerous weapons that exist and they are able to kill millions of people while they can cause problems to the country that they attack for many years after the attack (UNODA n.d.). But, what is the theory of deterrence in nuclear weapons? The theory became more popular during the Cold War and it was connected with the nuclear weapons and the opinion that nuclear weapons could be purchased by a state in order to prevent a possible future conflict by another state that has already obtained them. With other words, the deterrence theory is connected to the prevention of an attack if we take into consideration that the nuclear weapons are the strongest mean to face a possible attack. However, the theory has been criticized because it is promoting the spreading of nuclear weapons to countries that according to the deterrence's opponents could use them for an actual war. Nowadays, the theory of deterrence and its consequences is crucial if we keep in mind the case of North Korea and the escalation of the crisis with the United States that is going to be analyzed further below.

As it was mentioned before, the states have obtained nuclear weapons mainly in order to reinforce their power, for economic investment, to gain new advantages in technology, for prestige and to prevent an attack on their land. Realism is a theory that is concerned about the use of nuclear weapons by the states and it is worth to be analyzed. First of all, realism is a theory that sees the world as an anarchic system where there is not a global government and states should and will do everything possible in order to secure their sovereignty (Cirincione 2008:49, Shindo 2017, Tuang Nah 2013 et al.). For realism, the main actor in the global system is the state and also this is the one that provides security for its citizens, while the international organizations or alliances are not capable of preventing conflicts between the states. Realism can be characterized as: classical (as expressed by Hans Morgenthau, Niccolo

Machiavelli, and Thomas Hobbes et al.), offensive realism (as expressed by John Mearsheimer) and defensive realism and neorealism/structural realism (as expressed by Kenneth Waltz). The main characteristic of all the categories of realism is that the states are the main actors in the anarchist global system. All realists consider that the states should rely on their own power and that the military power is the key to security while the external threats are being considered as foreign military powers (Shindo 2017). So, it is obvious that the acquisition and use of nuclear weapons from a realistic perspective is being connected with security.

In the Cold War, when the United States developed their nuclear weapons' programme, the Soviet Union should react and start its own programme too. The same thing happened with France and other European countries that in order to prevent a possible attack from the Soviet Union had to invest in nuclear weapons (Sagan 1996:58). According to structural realism, this happens because the nuclear weapons are the most immune weapons for a country and if your enemy has these weapons then you should have them too which is a term connected to deterrence. This leads us to a spreading of nuclear weapons and the term: proliferation (Sagan 1996). Realism as a theory has different approaches on proliferation and the various theorists have expressed different opinions about it.

To be more specific, neorealists like Kenneth Waltz argue that the spread of nuclear weapons would bring more peace in the world as long as it would be too costly and risky for a state to start a nuclear war (total proliferation) (Waltz 1981, Suni 2015, Bell and Miller 2015). In order to secure his position, Waltz mentions that during the Cold War the avoidance of a direct conflict between the United States and the Soviet Union was achieved because of their nuclear weapons. Additionally, we should mention Waltz's view that the spread of nuclear weapons (aka proliferation) is a better choice than the non proliferation or a fast spread of nuclear weapons (Waltz 1981). He underlines the fact than if for example India has a nuclear programme then Pakistan should also purchase nuclear weapons in order to feel more secure, otherwise a country with nuclear weapons should protect it in order to keep the balance in the global scene, something that Waltz as a realist does not encourage. By contrast, John Mearsheimer, an offensive realist is not as optimist regarding to proliferation as Waltz. Mearsheimer (1993) mentions that proliferation is unavoidable and intended in some cases that stability should be kept, but not in all cases (e.g. the nuclear weapons in post Cold War

Europe in order to prevent an attack from the Soviet Union). These views of the realists lead us to the term: balance of power, which means that all the states have the same power (when we refer to power here we mean armed forces) and this leads to stability in the anarchist system which brings peace (Shindo 2017). Of course, there are those who are against the theories of realists regarding the nuclear weapons proliferation. Cirincione (2008:52) mentions that the possession of nuclear weapons may provide security and stability but the purchase of the weapons from many states in an area means that there is a 'security dilemma'. In addition, Cirincione (2008: 53) mentions that in some cases a 'security umbrella' is a better choice than the procurement of nuclear weapons from many countries in an area (e.g. the 'security umbrella' in post World War II Europe). Furthermore, there is the view that the states are offensive from their nature and nuclear weapons bring more power to the states which means that they could be even more offensive to states with non nuclear weapons which is against Waltz's theory that the states with nuclear weapons may be more peaceful because they have the utmost weapon (Bell and Miller 2015).

The proliferation theory met plenty of disagreements and in 1968 the states that already had nuclear weapons signed the Treaty on the Non Proliferation of Nuclear Weapons (NPT) which started being active in 1970. The NPT has as its purpose to "prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament." (UNODA n.d.). Today the NPT has been signed by 191 countries while the authorized countries with nuclear weapons are: the United States, Russia, the United Kingdom, France and China (UNODA n.d.). Of course, it is of high importance to mention that the other countries that are believed to have nuclear weapons; India, Pakistan, Israel and North Korea are not members of the treaty (Armscontrol.org. 2017). The ignorance of the treaty by these states has brought into surface the question whether the NPT is an effective way to prevent the states from having nuclear weapons technology or whether some further steps should be taken. Hence, most of the members of the NPT follow respectively the rules of the treaty but some scholars have wondered if these states are loyal because of the treaty or because of other reasons. To be more specific, Bergner (2012) stresses the fact that countries follow the treaty in order to have economic and political benefits from the international community. However, it has been noticed that NPT has been successful at

preventing many countries to develop further their existing nuclear programmes, or abandon them (e.g. Ukraine, Libya et al.) (Sidhu 2012:410). Hence, this criticism does not mean that the NPT has done nothing during its existence, but it is obvious that if a state wants to ignore it and start a nuclear programme (e.g. North Korea), then it is more than able to do it. Furthermore, there is a number of states that have condemned the NPT because they believe that it favors the states with nuclear weapons. More analytically, the five states with nuclear weapons have been criticized that they ignore the article VI of the NPT and they have not reduced their nuclear weapons in order to reach complete disarmament in the future as it derives from the treaty (Sovacool 2011, Sidhu 2012). An example is the United Kingdom that updated its nuclear system (Trident), proving that it is going to have active nuclear weapons at least until the middle of the century (Sidhu 2012:414). Hence, in a reality that the dangers in security are being expanded, the reach of a nuclear zero is even harder.

After analyzing the environment of nuclear weapons and some theories that are related to it, at this point we should start analyzing the current nuclear status, outlining at the same time examples of state and non state actors that have shown their interest in nuclear weapons during the past and the present, in order to connect the theory with the praxis.

During the last decades and especially the last months, North Korea has concerned the international organizations (e.g. United Nations) and the global scene; especially the United States and South Korea, regarding its nuclear policies and statements by the officials of the country. North Korea started its nuclear ambitions back in the 1960s when the country decided to start a nuclear programme in order to strengthen its security and start the so called 'all-fortressization': the beginning of the hyper militarized North Korea (Tuang Nah 2013, Assefa 2015:352). The relations between North Korea and the United States were hostile during the Cold War and one possible reason for the desire of the country to develop its nuclear weapons may be this, taking into consideration that the United States had developed further their nuclear technology during this period (Tuang Nah 2013:65, Sidhu 2012). From the perspective of realism, this is not insane if we take into consideration that the United States is an ally of South Korea and the only allies of North Korea were China and the Soviet Union which then collapsed (during the Cold War). Related to this, Waltz would say that maybe China and the Soviet Union would not risk their security in order to help North Korea in a

possible attack against it, so the development of nuclear weapons by North Korea would seem logical.

North Korea was a member of the NPT from 1985 until 2003 when it stopped following the treaty and received sanctions from the international community. The country has announced many times that it has nuclear weapons and that it has also conducted nuclear tests that have been condemned from the international community and the international organizations (BBC 2017). In the early 2000s North Korea agreed to stop its nuclear programme and collaborate with the United States and the international community for gaining economic aid but the negotiations stopped in 2009 and they never started again (BBC 2017, Simpson 2016). North Korea's nuclear weapons are being told to be active and powerful because the tests that the country has made have been successful (BBC 2017). However, the experts cannot be sure about it because the country has not given many details about its programme. Lately, in 2016 and 2017, North Korea has announced that it has achieved to have a hydrogen bomb test and that the country will soon have an intercontinental nuclear test (Kwon and Berlinger 2017). The Trump administration has condemned these statements and the relationship between the two countries seems to get worse (Kristof 2017). Furthermore, both states have threatened each other for possible strikes (Kwon and Berlinger 2017). The question that emerges is: What does that mean in terms of nuclear balance?

Many experts claim that a possible wrong move by the United States could lead to an armed conflict with North Korea, something that could have unknown consequences for the international community. The leader of North Korea, Kim Jong Un, has declared many times that his country has the ability to hit the United States with nuclear weapons and destroy it if the sovereignty of North Korea be threaten (Kwon and Berlinger 2017). Although a move like this may sound risky, North Korea could turn its nuclear weapons against the allies of the United States in the region, something that could be more possible. More specifically, South Korea and Japan are two countries that the United States has located troops and a possible attack would bring an enormous cost for the country. The current balance in this situation is not stable and the fact that North Korea is not a member of the international treaties that have been signed makes the danger even bigger. It is obvious then, that the states may omit the treaties that have been signed at an international level if their national interests are being threatened.

One of the greatest challenges of the use of nuclear weapons is the possible access to them by non state actors or states that have been connected with terrorist organizations. The United States consider that the ‘nuclear terrorism’ is the most hazardous global threat (Nayan 2012:88). A much debated question is whether Al Qaeda or the Islamic State of Iraq and Syria (ISIS) could develop nuclear programmes and target their enemies or not.

In recent years, there has been an increasing amount of literature on the use of weapons of mass destruction (WMD) in terrorism (Bolanos 2012, Duyvesteyn 2010 and Bowman 2002). There is a number of examples of the use of these weapons during the time by terrorist organizations, such as: the attacks in Tokyo subway in 1995 and the anthrax attacks in the United States in 2001. In light of recent events in terrorist attacks and the development of the non state nuclear danger, it is becoming extremely difficult to ignore the existence of the threat of the creation of nuclear ballistic missiles by Al Qaeda. Previous reports and official documents have proven that the terrorist group had created contacts with nuclear scientists of Pakistan, a country that was a base for Taliban, a group tightly connected to Al Qaeda (NTI 2016). Moreover, according to statements by former members of the terrorist group, Al Qaeda had the knowledge to create nuclear bombs and was trying to purchase uranium and other materials in order to achieve it (Watt 2011). However, there are scholars that mention that the use of nuclear weapons from terrorist organizations is not yet possible (Dunn 2005). To be more specific, Mueller (2012:86) claims that Al Qaeda and other contemporary terrorist organizations are not likely to use soon nuclear weapons as long as they need advanced technology and the “know-how”. Furthermore, after the 9/11 attacks and the war in Afghanistan, experts of the CIA supported that “they found no credible information that Al Qaeda had obtained fissile material or a nuclear weapon” (Mueller 2012:88).

But, the danger does not originate only from Al Qaeda. ISIS, one of the most dangerous terrorist organizations of the last decade, has been accused of pursuing access into nuclear technology (Saul 2015, Cooper 2016). Although specialists claim that this scenario has a short possibility, one possible threat is that these terrorist organizations could use their forces in order to achieve an explosion at the nuclear storages in Europe, something that would cause great casualties (Cirincione 2016). Furthermore, a third scenario reputed to be that the terrorist groups could steal the materials needed in order to create nuclear weapons from countries without a high securitized nuclear storages

like Pakistan (Nayan 2012:90). But, as Bellany (2012:96) mentions, even though terrorist can find the raw materials for nuclear weapons, “the device will be very heavy and very difficult to transport from one part of the world to another in secrecy, unless the device is made, rather improbably, in the target state itself. An attempt to ship the device in parts would increase the risk of detection”.

The entire above have as a result that the nuclear world nowadays is not a simple matter, but a polymorphous problem that has caused the concern of the global powers about the future. The cases of North Korea, Iran, Pakistan and other countries that have under their authority nuclear missiles and are not members of the NPT, pose an even bigger threat. The nuclear balance nowadays is fragile if we take into consideration that the world is being characterized by a multipolar system with non state actors playing an important role in it. How can we reach a nuclear zero that could bring the balance into the system? The question is difficult to be answered because as we mentioned above, because of the anarchy in the system and the absence of a global government, the states will do whatever it takes in order to secure their survival against the more powerful neighbors. The NPT that has as a target the revocation of nuclear weapons in the future, has not yet been implemented because the states invoke their deterrence in order to maintain their nuclear programmes (Tauscher 2007). A noteworthy example is Iran and its motivation in order to develop a nuclear programme. From a realist perspective, Iran has aimed to gain nuclear weapons in order to reinforce its security in an area that Israel and its ally United States have also developed nuclear missiles (Evron 2012). In that case the scenario of deterrence has some supporters mentioning that even if Iran acquire nuclear weapons, it will not risk a first strike against Israel, taking into consideration that the second has a ‘second strike capability’ (Evron 2012). Furthermore, as Evron (2012:383) mentions “Since the destruction of Iran is not an Israeli objective, Israel would have no motivation for a first strike”. However, a nuclear armed Israel could pose a threat against Iran in the case that the first had a serious conflict with some of Iran’s allies, that could lead to a first attack (Evron 2012:383). Another example is Pakistan and India. Back in the 1960s Pakistan started its nuclear programme because of the hostile relations with its neighbor, India, that had already started to create ‘the bomb’ (NTI 2016). Moreover, it is remarkable to be mentioned that Pakistan in the 1990s and during its nuclear tests, declared that the creation of the missiles is because

of “self defense”, showing that deterrence is a strong reason for a country to go nuclear (NTI 2016).

In an era that the world is facing enormous dangers and the technology is developing rapidly, it is utopian to believe that the countries will reach to a nuclear zero, at least soon. The multipolarity of the system and the absence of a superpower that could move the threads bring into surface obstacles for reaching an era without nuclear threats. The bipolarity of the previous years that has led to a more stable global system and a classical balance of power was in a period that diplomacy has failed and the war was on the stage (Munster and Sylvest 2014). The deterrence and the realistic perspectives of the ‘state security’ are still active on the global scene and more countries in the future may request to create nuclear weapons. However, the international organizations and the international law have achieved partly to alleviate the nuclear weapons to states except for the ‘legal 5’, the cases of North Korea, Pakistan, Iran etc. confirm that the NPT and the international law is still incapable of achieving its final purpose.

Hence, we are coming to the conclusion that although nowadays not only states are the main actors in the global scene, realism has a unique place in the global system. The theories of Waltz and the ‘fathers’ of realism regarding the nuclear weapons are still timely, taking into consideration that as we mentioned before, the states call on their state sovereignty and security in order to keep expanding their nuclear programmes (e.g. N. Korea, Pakistan, Unites States). The proliferation of nuclear weapons in terms of deterrence, led to the NPT era, when the ‘nuclear 5’ are the only states that are allowed to have nuclear weapons, but should also reach a nuclear zero during the period of time. Of course, the NPT has not yet achieved its purposes, while four more states have been proved that have under their possession nuclear missiles. The current balance of nuclear weapons is unstable and the threats that the countries have to face are plenty. Not only have the states required access into nuclear technology but also the serious development of terrorist groups and their possible access to this technology makes the current balance even more fragile. Of course, in the case of terrorist organizations the possession of nuclear weapons is not related to the term of deterrence but to a new wave of terrorism that has as its purpose to use weapons in order to kill as many people as possible. To conclude with, it is of high importance to underline that as the globalization affects more and more the geopolitics and economics of the global chessboard, then the examples that now are taken as facts will change.

LIST OF REFERENCES

- Armscontrol.org. (2017). *Avoiding the Tipping Point* / Arms Control Association. [online] Available at: https://www.armscontrol.org/act/2004_11/BookReview [5 January 2018].
- Assefa, L. (2015). North Korea's nuclear program and the treaty on the non-proliferation of nuclear weapons: The controversy and its implications. *African Journal of Political Science and International Relations*, [online] 9(9), pp.349-360. Available at: http://search.proquest.com/docview/1870970416?rfr_id=info%3Axri%2Fsid%3Apmo [6 January 2018].
- BBC News. (2017). *North Korea's nuclear programme: How advanced is it?* - BBC News. [online] Available at: <http://www.bbc.co.uk/news/world-asia-pacific-11813699> [6 January 2018].
- Bell, M. and Miller, N. (2015). Questioning the Effect of Nuclear Weapons on Conflict. *SSRN Electronic Journal*. [online] Available at: <http://journals.sagepub.com/doi/pdf/10.1177/0022002713499718> [5 January 2018].
- Bellany, I. (2012). Outflanking missile defences: the Nuclear Non-proliferation Treaty, nuclear weapons and terrorism. *Defense & Security Analysis*, [online] 28(1), pp.81-96. Available at: <http://www.tandfonline.com/doi/pdf/10.1080/14751798.2012.651381?needAccess=true> [5 January 2018].
- Bolanos, A. (2012). 'The new terrorism or the 'newness' of context and change'. in *Contemporary Debates on Terrorism*. ed. by Jackson R. and Sinclair S. J. Oxon: Routledge, pp. 29-35
- Bowman, S. (2002). Weapons of Mass Destruction: The Terrorist Threat. *CRS Report for Congress* [online], pp.1-7. Available at: <https://fas.org/irp/crs/RL31332.pdf> [5 January 2018]
- Cirincione, J. (2008). *Bomb scare*. 1st ed. New York: Columbia University Press.

- Cooper, C. (2016). *Isis nuclear bomb is a serious threat, warns Barack Obama*. [online] Independent. Available at: <http://www.independent.co.uk/news/world/politics/isis-nuclear-bomb-is-a-serious-threat-warns-barack-obama-a6964621.html>> [5 January 2018]
- Crincione, J. (2016). *Nuclear terrorist threat bigger than you think*. [online] CNN. Available at: <http://edition.cnn.com/2016/04/01/opinions/nuclear-terrorism-threat-cirincione/>> [5 January 2018]
- Demetriou, D. (2017). *Hiroshima: 70 years on, one survivor remembers the horror of the world's first atomic bombing*. [online] Telegraph.co.uk. Available at: <http://www.telegraph.co.uk/news/worldnews/asia/japan/11778250/Hiroshima-70-years-on-one-survivor-remembers-the-horror-of-the-worlds-first-atomic-bombing.html>> [5 January 2018].
- Dunn, A. L. (2005). Can Al Qaeda be deterred from using nuclear weapons? *Centre for the Study of Weapons of Mass Destruction*, [online] 3, pp. 1-29. Available at: http://wmdcenter.ndu.edu/Portals/97/Documents/Publications/Occasional%20Papers/03_Alqaeda_Nuclear_Weapons.pdf> [5 January 2018]
- Duyvesteyn, I. (2010). How new is the new terrorism?. *Studies in Conflict and Terrorism* [online] 27, pp. 439-454. Available at: <http://www.tandfonline.com/doi/abs/10.1080/10576100490483750>> [5 January 2018]
- Evron, Y. (2012). EXTENDED DETERRENCE IN THE MIDDLE EAST. *The Nonproliferation Review*, [online] 19(3), pp.377-390. Available at: <http://www.tandfonline.com/doi/pdf/10.1080/10736700.2012.734186?needAccess=true> [5 January 2018].
- K.J. Kwon and Joshua Berlinger, C. (2017). *Kim Jong Un says North Korea close to testing ICBM*. [online] CNN. Available at: <http://edition.cnn.com/2017/01/01/asia/north-korea-kim-jong-un-speech/> [5 January 2018].
- Kristof, N. (2017). *Opinion / The North Korea-Trump Nightmare*. [online] Nytimes.com. Available at: <https://www.nytimes.com/2017/04/20/opinion/the-north->

[korea-trump-nightmare.html?rref=collection%2Ftimestopic%2FNorth%20Korea%27s%20Nuclear%20Program&_r=1](#) [5 January 2018].

Mearsheimer, J. (1993). The Case for a Ukrainian Nuclear Deterrent. *Foreign Affairs* [online], 72 (3), pp. 50-66. Available at:
<<http://mearsheimer.uchicago.edu/pdfs/Mearsheimer,%20Case%20for%20Ukrainian%20Nuclear%20Deterrent.pdf>> [5 January 2018]

Mueller, J. (2012). WMD terrorism: the prospects. in *Contemporary Debates on Terrorism*. ed. by Jackson R. and Sinclair S. J. Oxon: Routledge, pp. 84-89

Munster, R.V. and Sylvest, C. (2014). Reclaiming nuclear politics? Nuclear realism, the H-bomb and globality. *Security Dialogue*, [online] 45 (6), pp. 530-547. Available at:
<https://cumoodle.coventry.ac.uk/pluginfile.php/1606132/mod_resource/content/1/Munster%20and%20Sylvest_Reclaiming%20nuclear%20politics%202014.pdf> [5 January 2018]

Nah, L. (2013). Explaining North Korean Nuclear Weapons Motivations: Constructivism, Liberalism, and Realism. *North Korean Review*, 9(1), pp.61-82.

Nah, L. (2013). Explaining North Korean Nuclear Weapons Motivations: Constructivism, Liberalism, and Realism. *North Korean Review*, 9(1), pp.61-82.

Nayan, R. (2012) The Emerging Nuclear Security Regime: Challenges Ahead. *Strategic Analysis*, [online] 36 (1), pp. 87-99. Available at:
<<http://www.tandfonline.com/doi/pdf/10.1080/09700161.2012.628486?needAccess=true>> [5 January 2018]

Nti.org. (2016). *Pakistan / Countries / NTI*. [online] Available at:
<http://www.nti.org/learn/countries/pakistan/nuclear/> [5 January 2018].

Nuclear Age Peace Foundation. (2017). *Ten Serious Flaws in Nuclear Deterrence Theory*. [online] Available at: <https://www.wagingpeace.org/ten-serious-flaws-in-nuclear-deterrence-theory/> [5 January 2018].

Sagan, S. (1996). Why do states build nuclear weapons? *International Security* [online], 21 (3), pp. 54-86. Available at:
<https://fsi.stanford.edu/sites/default/files/Why_Do_States_Build_Nuclear_Weapons.pdf> [5 January 2018]

Saul, H. (2015). *Isis claims it could buy its first nuclear weapon from Pakistan within a year*. [online] Independent. Available at:
<<http://www.independent.co.uk/news/world/middle-east/isis-claims-it-could-buy-its-first-nuclear-weapon-from-pakistan-within-12-months-10270525.html>> [5 January 2018]

Shindo, R. (2017). *Nuclear Weapons* [online lecture] module M24ISS, March 2017. Coventry: Coventry University. Available at:
<<https://cumoodle.coventry.ac.uk/course/view.php?id=37237>> [5 January 2018]

Sidhu, W. P. S. (2012). 'The Nuclear Disarmament and Non- proliferation Regime'. in *Security Studies: An introduction*. ed. by Williams P. D., 2nd edition New York: Routledge, pp. 409-424

Simpson, E. (2016). Towards a World Free of Nuclear Weapons. *Peace Review*, 28(3), pp.309-317.

Simpson, E. (2016). Towards a World Free of Nuclear Weapons. *Peace Review*, 28(3), pp.309-317.

Sovacool, B.J. (2011). *Contesting the Future of Nuclear Power: A Critical Global Assessment of Atomic Energy*. Singapore: World Scientific Publishing Co. Pte. Ltd.

Suni, A. (2015). When are nuclear weapons worth having?. *Defence and Peace Economics*, [online] 26(5), pp.555-565. Available at:
<http://www.tandfonline.com/doi/pdf/10.1080/10242694.2014.948701?needAccess=true> [5 January 2018].

Tauscher, E. (2007). ACHIEVING NUCLEAR BALANCE. *The Nonproliferation Review*, [online] 14(3), pp.517-523. Available at:
<http://www.tandfonline.com/doi/pdf/10.1080/10736700701611787?needAccess=true> [5 January 2018].

UNODA (n.d.). *Nuclear Weapons* – UNODA. [online] Available at:

<https://www.un.org/disarmament/wmd/nuclear/> [5 January 2018].

UNODA (n.d.). *Treaty on the Non-Proliferation of Nuclear Weapons (NPT)* –

UNODA. [online] Available at: <https://www.un.org/disarmament/wmd/nuclear/npt/> [5 January 2018].

Waltz, K. (1981). The Spread of Nuclear Weapons: More May Be Better:

Introduction. *The Adelphi Papers*, [online] 21(171), pp.1-1. Available at:

<http://home.sogang.ac.kr/sites/jaechun/courses/Lists/b6/Attachments/39/5.%20The%20spread%20of%20nuclear%20weapons.pdf> [5 January 2018].

Watt, H. (2011) *Wikileaks: Al-Qaeda plotted chemical and nuclear attack on the West*. [online] Telegraph.co.uk. Available at:

<<http://www.telegraph.co.uk/news/worldnews/wikileaks/8472810/Wikileaks-Al-Qaeda-plotted-chemical-and-nuclear-attack-on-the-West.html>> [5 January 2018]