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## Nuclear Disarmament and Proliferation: Can we get the genie back into the bottle?

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*“The genie is out of the bottle in terms of some very bad stuff — chemical, biological, but also nuclear. People are going to have very powerful weapons. And they don’t care about safety, they don’t care about accuracy, they don’t care about reliability, they don’t care about making big volumes of these things. If they get them, they have power and they can alter behavior.” (US Defence Secretary Donald H. Rumsfeld)<sup>1</sup>*

The recent deal reached over Iran’s nuclear programme once again highlights the problem of nuclear weapons and issues related to nuclear disarmament and non-proliferation, which gained new impetus following the election of President Barack Obama.<sup>2</sup>

In April 2009, in Prague, President Obama declared the United States’ commitment to seek “the peace and international security of a world without nuclear arms.” During the speech, President Obama voiced his determination to implement effective measures that would enable nuclear disarmament and non-proliferation, including the reduction of the role of nuclear weapons in national security strategy, the negotiation of a new agreement with Russia to reduce the nuclear

<sup>1</sup> James Dao. “Rumsfeld Calls on Europe to Rethink Arms Control”. New York Times, 11, 2001. Available at: <http://www.nytimes.com/2001/06/11/world/11RUMS.html> Accessed on; August 10, 2015.

<sup>2</sup> Nuclear weapons meaning nuclear explosives and the means to launch them (Tulliu and Schmalberger, 2001, Rio de Janeiro, n.413, p.48-49, April 17 2006, n.413, p.48-49, April 17 2006

weapons of the two countries, the ratification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT), and the elaboration of an agreement on the Iranian nuclear programme.

These statements – celebrated worldwide as a new American doctrine on nuclear weapons – earned Obama the Nobel Peace Prize in 2009. The Nobel Committee of Norway said the prize was awarded to Obama “for his extraordinary efforts to strengthen international diplomacy and cooperation between peoples”, noting that great importance was given to “Obama’s vision and efforts towards a world without nuclear weapons.”<sup>3</sup>

Following these declarations, some measures were adopted in 2010 by the US government. Nevertheless, these actions have not progressed toward disarmament. The US President’s speech in Prague and the subsequent Nuclear Posture Review document emphasise that nuclear disarmament will not be achieved soon, maybe not even in Obama’s lifetime.

On the one hand, action for compliance with Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which lays down the commitment of states to pursue nuclear disarmament, is going nowhere. Nuclear powers continue to work on honing their arsenals. On the other hand, pressure and mechanisms to prevent proliferation are greater than ever.

This paper attempts to analyse the role of nuclear weapons and the issue of nuclear disarmament and proliferation from the perspective of certain international relations theories, and, based on these findings, seeks to establish and analyse succinctly a few possibilities on future nuclear proliferation.

## The role of Nuclear Arms

After World War II, in a then bipolar world, the US’s nuclear monopoly was replaced with a scenario of nuclear proliferation. Nuclear weapons began to play an important role in the dispute between the US and the Soviet Union. However, the fear of a nuclear holocaust produced a great change in the nature of war and international security, leading Bernard Brodie to coin the concept of nuclear deterrence.

This concept suggests that a war between two states possessing nuclear weapons would be impossible, insofar as one of them, even after suffering a first strike, would be able to retaliate in such a way that would inflict more devastation and costs for the adversary than any benefit gained by the state initiating the attack. As such, since the advent of nuclear weapons, the purpose of military power was no longer to win wars, but avert them (Brodie, 1973).

Although proliferation hasn’t been rapid since the dropping of nuclear bombs on Japan, it has continued to evolve and countries such as Pakistan and India joined the club in 1998, followed by North Korea, which conducted its first nuclear test in 2006.

<sup>3</sup> Statement by the Chairman of the Nobel Committee for Peace in announcing the choice of Barack Obama for the Nobel Peace Prize 2009. Available at: <http://www.nobelprize.org/mediaplayer/index.php?id=1173>

There are many prevailing theories that attempt to explain the causes of proliferation. These lines of thinking include those that consider external and internal factors as what influences a state's decision to acquire nuclear weapons, and the theory that regards technological development as the key factor leading a state to pursue the development of nuclear weapons (Olgivie-White, 1996).

Various arguments exist for proliferation: matters relating to security, power, and the prestige of nations, as well as domestic factors related to politics, economics and bureaucracy. The latter would include, for instance, technological development and pressure from the military-industrial complex.<sup>4</sup> Other factors may also be at play in the decision to acquire nuclear weapons: the nuclearisation of other countries, the possibility of conflicts, the weakening of alliances that enable the protection against nuclear nations and the weakening of international pressure against proliferation (Duhn and Overholt, 1976).

Whatever the existing reasons, at least three conditions are necessary for the development of nuclear weapons: financial capacity, technological capability, and political will.

## **Nuclear Arms: Power and Security**

For advocates of the realist perspective in international relations, nuclear armament is understood as much by a state's need to seek power, as by its need to provide its own security in an anarchic international environment.

In the view of Kenneth Waltz, bipolarity and nuclear armament were the main factors that contributed to the lack of major conflicts following the Second World War. Bipolarity, because it has made the world more predictable and responsibilities clearer, made for a safer world than multipolarity. Similarly, nuclear armament helped avoid conflicts between the two superpowers due to the concept of nuclear deterrence. Waltz argues that force can be used to attack, coerce, defend or deter. He goes on to say that if nuclear weapons are used to attack and coerce, the possibility of war breaking out will increase. However, if they are used towards defence and deterrence, thereby increasing the security of states, this possibility decreases (Waltz, 1981).

In pursuit of security, countries decide what paths to follow; the acquisition of nuclear weapons is an option that might be considered in countries' attempts to feel more secure. According to Waltz, states may pursue nuclear armament for several reasons. First, a country might fear not being able to rely on a nuclear ally in the case of requiring defence against an attack from another nuclear power. In the case of France, for instance, this uncertainty, coupled with the fact that the French national culture would not accept a secondary role in the global power hierarchy, seems to have contributed to the country's seeking its own arsenal. Second, a country might fear the strength of adversaries' conventional weapons. This could, for instance, be the case of Israel. Third, nuclear weapons might be seen as an alternative to a possible and very costly

<sup>4</sup> Lewis A. Dunn and William H. Overholt article "The Next Phase in Nuclear Proliferation Research" presents an exhaustive list of pressures or reasons for a state to acquire nuclear weapons.

conventional arms race, if nuclear weapons are considered as more affordable. Fourth, a country might seek these weapons for offensive purposes. Fifth, a country might be aiming to boost its status and prestige (Waltz, 1981).

One must also consider that countries have historically demonstrated a tendency towards symmetry in arms acquisitions, especially in the field of conventional weapons (O'Connell, 1989), which can be extended to the nuclear field as well. Of course, this trend is more restrained in the case of nuclear weapons, for numerous reasons, among which one of the most important would be the international restrictions that hinder the acquisition and development of such weapons.

Waltz proposes the US adopt a selective policy for nuclear proliferation, based on the need for regional stability, US interests and an increment of security for each state. This pragmatism can be seen in the case of US support for France and England's nuclear arsenal development, silence regarding Israel's nuclear weapons and acceptance of India's nuclear programme. Contradicting those who consider that new nuclear states would be less responsible and less capable of self-control, Waltz argues that with more nuclear states the world would have a more promising future, as this would bring enhanced deterrence and reduce the chances of conflict between countries, as happened between the US and the Soviet Union, and between the Soviet Union and China (Sagan and Waltz, 1995).

Following such an approach, the possession of nuclear weapons would be a symptom of the realist conception of international relations. The pursuit of power and security in an anarchic system would generate the need for nuclear arsenal. The gradual proliferation which then ensued would therefore be beneficial in that countries would all hold nuclear deterrent capacity, thereby preventing warfare and guaranteeing the survival of states.

Hedley Bull considers that the issue of arms control is directly related to global political structures and the distribution of power within this framework.<sup>5</sup> Thus, he argues that cooperation in arms control between the United States and the former Soviet Union – while serving universal purposes such as avoiding a nuclear war with the potential to affect the whole world – serves primarily their own individual or bilateral objectives. These objectives reflect their desire to maintain and uphold the privileged positions they enjoy in the world order. Accordingly, there is a tendency to confuse the national security of the US and former Soviet Union with international security itself. It ought instead to be noted that bilateral cooperation in arms control between two global players promotes their own national security to the detriment of that of other states, by developing, for instance, their own spheres of influence, or by preventing other states from acquiring weapons that could contribute to their own security (Bull, 1976).

As such, according to Bull, arms control between these two powers allows them to maintain a level of nuclear weapons based on and serving the principle of nuclear deterrence. This comes at the expense of nuclear disarmament as called for under

<sup>5</sup> Arms control is defined by Bull, in conceptually broad terms, as those acts of military policy in which antagonistic states cooperate in the pursuit of common purposes even while competing in the pursuit of conflicting objectives (Bull 1976: 3)

Article VI of the NPT. The issue of nuclear parity formalises the special position these countries hold in the hierarchy of world military power. This is the policy that Russia and the US continue to exercise even in the post-cold war world. Talks between the two countries aim to reduce the number of nuclear weapons and establish verification mechanisms. They fail to produce concrete results for nuclear disarmament, serving their own purposes, and simultaneously impede the development of nuclear programmes in other countries, imposing tighter rules on nuclear energy development – even for peaceful purposes. Arms control, abstracting arguments in defence of this concept, by determining that proliferation is “bad”, serves to maintain the world’s existing distribution of power. Instead of calling for disarmament, it bans possession for those who do not yet have access to these weapons, without prohibiting those who already produce them from continuing to do so (Bull, 1976).

Bull further argues that backlash from the other countries inevitably occurs, since they deem the situation to be the reflection of a hegemonic system in which certain parties wish to maintain the status quo, therefore ignoring all calls for a more just and egalitarian international order. He reasons that to maintain a functioning international society of states, a consensus on the minimum level of order that such a system should possess must be achieved. He advocates, thus, for a distribution of power that includes the least developed countries, which constitute the majority of states and of the world’s population. Developing countries’ alienation to the world order is rooted in colonialism and racism, in the uneven distribution of wealth, in the technological divide, and also in the lack of power sharing, including militarily. As these countries evolve politically and economically they yearn, not only for order, but also for change. The countries which currently hold the reins of world power will thus inevitably be confronted with challenges from the developing world.<sup>6</sup> Arms control regimes, inasmuch as they favour the most powerful states, are an obstacle to some of these changes (Bull, 1973).

Similarly, it is necessary to take into account that while arms control is basically related to military strength, changes in this strength affect other variables which form the patchwork of relations between states. In short, arms control is related to the distribution of power in the international arena. Horizontal control cannot be separated from vertical control and disarmament. When nuclear weapons states establish that these weapons are instruments for effective policy and prestige, important parts of their national security strategies, and continually seek to enhance them, they produce a very contradictory reality to the nuclear non-proliferation discourse that they so vigorously defend. The military power hierarchy is maintained through these rules which reflect a desire to maintain the status quo. Moreover, having more nuclear countries merely means changing the number without solving the problem. A fairer international society implies nuclear disarmament. Nevertheless, Bull, considering the difficulties of this position, proposes to seek at least a reduction in the nuclear arsenals of the major powers, coupled with the adoption of a principle of not being the first to resort to using nuclear weapons, and the implementation of a treaty banning nuclear testing (Bull, 1973).

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<sup>6</sup> The Iranian nuclear program is an example of this type of challenge.

Krause believes that the arms control policy agenda, and more specifically, nuclear non-proliferation, have been influenced by the liberal school of thought – and that its followers constitute an epistemic community that has been contaminated by ideological ills.<sup>7</sup> According to him, this community has created myths. First, that the NPT would be a disarmament treaty, when in fact it was formed to be a treaty of non-proliferation. Second, that the nuclear powers would have changed their strategies to prevent the use of nuclear weapons in order to garner support for the NPT, when in fact, it is the national defence strategies of these countries that establish how to use nuclear weapons in the event of conflict. In his view, the US was acting prudently and sensibly in maintaining a nuclear arms race in order to contain the former Soviet Union, but this is not accepted by liberals because it goes against the whole idea they defend that arms races are always dangerous and lead to war (Krause, 2007).

Another myth would be that the US anti-proliferation policy had changed substantially during the Bush administration. Krause contends that the Republican president maintained, and, to a certain extent, expanded upon the policies of President Clinton, his Democratic predecessor. Clinton's policies sought to prevent a loss of control of the former Soviet Union's nuclear arsenal; contain the possibility of further countries becoming nuclear; and devise a nuclear weapons defence system and strategy (defence against ballistic missiles, protection from nuclear, biological and chemical threats, and a strategy for striking targets of mass destruction). Krause concludes by stating that nuclear weapons in the hands of countries with long established democratic governments and traditions of moderation and responsibility towards the international order are not a problem. He contends that the possession of such weapons by this small number of countries is even a prerequisite for the maintenance of global order. The problem therefore is how to prevent "problem players" taking control of these weapons (Krause, 2007). In short, Krause defends nuclear non-proliferation, dismisses nuclear disarmament as one of the foundations of the NPT and argues that nuclear weapons from countries with "long established democratic governments" contribute to maintaining world order. The author does not analyse, however, how powers such as China and Russia, which would not meet the democratic requirement, would enter this scenario.

Sidhu agrees with Bull and Krause that there is a relationship between world order and nuclear weapons and advocates that possession and protection of these weapons remains an essential element of post-cold war world order. He believes that, ironically, the NPT serves to prevent proliferation and induce disarmament of precisely the weapons upon which the world order and international security are based (Sidhu, 2008).

Singer also considers that nuclear weapons play an important role in global strategic considerations; he highlights, however, the existence of a racist attitude towards the Global South. Concerning nuclear weapons, he points to a sense of superiority amongst the Western elite with regard to the developing world, and to a certain resistance on the part of existing nuclear powers to allow developing countries to possess nuclear arms.

<sup>7</sup> Krause uses Ruggie's definition, which considers epistemic community as "a predominant way of seeing social reality, a set of shared symbols and references, mutual expectations and predictability of intent" (Krause, 2007: 485)

Singer highlights a geo-cultural division in decisions related to such weapons, making it possible and logical, for instance, to simultaneously accept Israel as a nuclear-weapons state whilst condemning Iran for its nuclear programme (Singer, 2007).

Whilst there are other factors which contribute to the development of nuclear programmes by the countries of the Global South, Singer believes that there are two primary motivations still relevant today. First, the will to exercise their right to develop nuclear energy for peaceful purposes, as set out in the NPT, repudiating that this should be a privilege reserved for a minority of countries. Second, countries see the development of nuclear power as a chance to use this energy source to foster economic development. The author suggests an unconventional approach to deal with nuclear proliferation: an environmental approach that attempts to show the economic and environmental disadvantages of the development of nuclear energy and create incentives for the development of alternative energy sources.

Finally, Singer believes that given declining US dominance in the Global North and the increasing independence of Europe and countries such as India and China, there should be more emphasis on multilateral negotiations and more importance placed on the role of the International Atomic Energy Agency (IAEA) and the NPT. For instance, acceptance of nuclear energy development for peaceful purposes as set out in the NPT should be accompanied by: measures that strengthen the controlling capacity of the IAEA; campaigns that show the economic and environmental disadvantages of nuclear energy; and measures that stop the development and proliferation of Russian and US nuclear arsenals. However, he notes that it might be too late for this “happy ending” as there is a growing sentiment against the hegemony of more advanced Western nations. This sentiment, nonetheless, is not unanimous, and nations such as China and India accept this hegemony, which shows that any analytical approach based on a division closely related to racial or geographical aspects is an oversimplification of the matter (Singer, 2007).

Post-colonial theorists consider the distinction between countries that possess nuclear weapons and are allowed to do so, and countries that do not and suffer from existing bans and limitations as a type of “nuclear apartheid”.<sup>8</sup> Biswas believes that the discriminatory nature of the NPT coupled with the fact that the five permanent members of the UN Security Council are precisely the five nuclear states *de jure*, indicates that the nuclear non-proliferation regime perpetuates the logic of colonial violence, oppression and inequality. This logic, he contends, is clearly depicted in the institutionalisation and legitimisation granted through arms control treaties, which create a nuclear club made up of countries that have the right to bear nuclear weapons, excluding the vast majority of countries that do not have – and are denied the right to develop – such weaponry. Treaties such as the NPT and the CTBT (Treaty of Complete Prohibition of Nuclear Tests) serve, therefore, not to preserve peace, but rather to maintain the monopoly of nuclear violence (Biswas, 2001).

<sup>8</sup> The term was used by India in 1998 to explain the discrimination that affects countries that don't possess nuclear weapons and to justify the development of its own nuclear programme. For more information on the article published by the advisor to the Indian Prime Minister, Jaswant Singh, see <https://www.foreignaffairs.com/articles/asia/1998-09-01/against-nuclear-apartheid>

Biswas argues, however, that the use of the term “apartheid” in this case is analytically problematic in view of the fact that the conceptually implicit need for a democratic posture runs counter to the essentially undemocratic character of nuclear weapons. The use of this argument by India in 1998 to justify its nuclear programme, for instance, does not make sense, since the proposal for equal ownership for all states is used only to secure their own national interests. The current Indian attempt to join the Nuclear Suppliers Group (NSG) is a demonstration that the regime of inequality argument is only made whilst the country is not accepted into the very nuclear club that it criticises. Hence, while recognising the related security problems, particularly with Pakistan, Biswas believes India’s decision to declare itself a nuclear weapons power must have been based on domestic factors (Biswas, 2001).

## Domestic Factors

The argument that the existence of more nuclear powers might somehow be good is contested by those who view this proliferation negatively, arguing it brings more instability to the world, considering that some of the new nuclear actors may not have the framework to ensure the rational control of this type of weaponry. According to Sagan, the concept used by realists that countries act and decide rationally, based on costs versus benefits, can be contested (Sagan and Waltz, 1995).

The main point made by this group, based on organisational theory, is that military organisations behave in ways that could lead to a failure of the deterrence mechanism and a consequent outbreak of war, either by accident or on purpose. Unless there is strong civilian control, military organisations cannot fulfil the operating conditions needed to ensure stable nuclear deterrence. The second argument is that future nuclear weapons states would not have appropriate mechanisms for such civilian control, either because they have military governments or weak civilian governments with strong military influence (Sagan and Waltz, 1995).

The view that civilian control over the military makes the world safer is disputed by Waltz, for whom there are historical examples indicating that, sometimes, civilian leaders are less concerned about the consequences of a war than military ones. Some examples he cites are the Dardanelles Campaign, which was practically imposed by Winston Churchill, and the Crimean War, considered by the military as an “impossible war.” Waltz also refutes the theory that in a crisis the military favour the use of force. To illustrate, he uses as examples the crises of Morocco, the deployment of troops to Lebanon, the invasion of Grenada, and the Pentagon’s opposition to the invasion Haiti in 1994, when the US military were against the use of force (Sagan and Waltz, 1995).

The issue of nuclear proliferation is therefore deeply complex. Nationalist sectors within countries favour restrictions on globalisation and tend to defend a more aggressive nuclear policy. Concerning security, their arguments are more in line with those advocated by the realist school of thought. Conversely, some analysts who prioritise domestic political factors in decision-making regarding nuclear development call into question the link between nuclear weapons and security, arguing that nuclear weapons possession does not necessarily guarantee the security of the state and may even threaten it (Solingen, 1994).

Proponents of the importance of domestic factors in a state's given nuclear posture believe that states do not act as one unified actor. They have diverse interests and different domestic actors may have different perceptions of the problem of security. Hence, they argue, history has shown that some states have kept ambiguous nuclear policies, while others prefer not to seek to develop nuclear weapons, giving preference to economic and political aspects of globalisation. In this way, domestic factors influence decisions on the appropriateness in adopting or not the nuclear option (Solingen, 1994).

Likewise, they argue that the spread of democracy and economic liberalisation are contributing factors to nuclear non-proliferation. The expansion of democracy due to media influence and political parties, as well as groups opposed to nuclear weapons all contribute to this. Economic liberalisation also leads to this end, since national economic groups which view themselves as stakeholders in the globalised world are normally against nationalist projects and heavy military spending; indeed, any increased public spending is generally not encouraged and such actors prefer not to risk incurring economic sanctions from multilateral institutions or powers opposed to nuclear proliferation. Argentina, Brazil, South Africa, South Korea and Taiwan are, according to Solingen, examples of countries that have adopted nuclear policies along this line of thought. This position is reinforced by policies of encouraging cuts in military spending as a condition for the approval of economic aid, as adopted by some international institutions such as the IMF and the World Bank.<sup>9</sup> Some analysts argue that these multilateral institutions, and also non-governmental organisations, influence domestic decisions regarding nuclear power. In extreme cases, in which persuasion and economic or peer pressure are unlikely to deter a country from the pursuit of nuclear weapons, and if it is judged that there is potential danger of their employment, these analysts defend the use of force to contain proliferation (Solingen, 1994).

Democracy and economic globalisation, however, do not always result in a domestic stance against nuclear proliferation. India, the world's largest democracy in voter turnout, which has been characterised by its pursuit of international economic insertion, tenaciously pursued the goal of becoming a nuclear power, despite international pressure. Likewise Pakistan, which in the early nineties put forth to India the prospect of creating a nuclear-weapon-free-zone and raised the possibility of signing the NPT in return for US economic advantages and a better economic insertion in the globalised world, ultimately maintained its nuclear programme and is today a nuclear weapons state.

Conversely, the policy of giving up nuclear programmes in exchange for economic advantages seems to prevent new countries from developing nuclear weapons. Although not successful in the case of North Korea, it did manage to halt Libya's nuclear development programme. And apparently the recent agreement signed between the five nuclear powers plus Germany (P5+1) and Iran, will limit Iran's nuclear programme solely to activities of a civil nature.<sup>10</sup> It is difficult, however, to predict whether this

<sup>9</sup> World Bank, *IMF to Press Defense Cuts*. Washington Post, Washington, D.C., B1, 18 Oct, 1991

<sup>10</sup> The P5 + 1 and Iran agreement was signed on 14 July, 2015. The agreement allows Iran to pursue a civilian nuclear programme since it reduces its nuclear material enrichment capacity. In exchange for the suspension of sanctions imposed by the United States, European Union and the UN, Iran has agreed not to advance its nuclear activities at its Natanz and

policy will succeed in future cases. There is even the possibility that it could provoke the opposite effect: bringing about a decision by some states to implement nuclear programmes precisely to use as a form of bargaining chip on the international stage.

## The Strategic-Political Role of Nuclear Arms

Some analysts advocate the validity of the possession of nuclear weapons, be they based on either external or internal factors, while others believe there are no such advantages to having them. The question seems inconclusive.

Contradicting the liberal view that war is a pathological deviation from the norm, realists say that “war has been throughout history the normal way of settling disputes between political groups ...” (Howard, 1987). States need to maintain internal social control and at the same time act upon an international stage of sovereign nations, with each defending its own interests, some of which are conflicting. States, thus, act internally in order to implement law and order and avoid conflict between social groups, since peace and internal security are fundamental to their existence. However, in the interaction with other nations, realists believe that “force or its threat has a very important role in determining the structure of the world we live in” (Howard, 1987). In this way, states seek to survive, influence others and achieve their objectives sometimes via the use of force, or the threat of its use.

According to Schelling, the destructive potential of weapons (conventional and nuclear) is exploited as a form of bargaining power by states that possess them. This forms part of diplomacy and can even be useful in influencing the behaviour and decisions of another state. Nuclear weapons play a prominent role in this “diplomacy of violence” because of their power to inflict great destruction much more swiftly and devastatingly than conventional weapons. Due to this particularly extreme character, meaning that military victory with decisive damage inflicted upon one’s adversary becomes less necessary, their advent has generated major changes in warfare. However, in this “diplomacy of violence” the importance of nuclear weapons is directly related to their non-usage: it is only effective when the political objective is achieved without the use of force (Schelling, 1966).

Samuel holds that nuclear weapons have played a significant role in preventing war between the major powers in the last fifty years, at odds with the authors who consider the possession or not of such weapons as irrelevant to this period of peace. He agrees, however, that nuclear deterrence is not the only reason for this outcome, since it was not enough to prevent the Korean War, nor other conflicts between non-nuclear countries and nuclear countries. Accordingly, “nuclear weapons could have a deterrent

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Fordow facilities and Arak reactor. Tehran also agreed to pass on to the IAEA information regarding its nuclear program and assured that the Agency’s inspectors shall have unrestricted access to nuclear facilities and military installations in the country. The agreement also determines the reduction of two thirds of the number of centrifuges, restricts which centrifuges and which facilities will enrich uranium to a level that does not exceed 5% for 15 years and prevents Iran from building new centrifuges for a period of 15 years. It also determines that Tehran reduces its stockpile of 10,000kg of uranium to 300 kg. The agreement also sets out to prevent the production of plutonium and transform the reactor under construction at the Arak plant into a model incapable of producing plutonium. The International Atomic Energy Agency will make inspections and have unlimited access to all nuclear and non-nuclear military installations.

effect, but nuclear deterrence would be a myth" (Sample, 2000: 187). In his view, war was averted during this period by the deterrent effect of these weapons, coupled with the development of standards and rules of behaviour between the opposing nuclear powers. This set of standards and rules was established via a communication and negotiation system that enabled cooperation on the international stage. However, Sample questions whether or not new nuclear powers would be capable of developing such a set of standards and rules so as to achieve the same peaceable outcome obtained during the Cold War (Sample, 2000).

Gray and Davis too claim that nuclear weapons contributed to the prevention of turning the Cold War into a violent conflict and argue that these weapons continue to play an important role in the current global strategic debate. In the post-Cold War world, we would be living a "second nuclear age" characterised by a scenario in which changes in the strategic field cause problems in the nuclear field where the threats are more diffuse. In addition, nuclear parity between Russia and the US would no longer make sense, given the reduction in conflicts and the political-strategic gap existing between the two countries, added to the fact that the international nuclear scenario now has new state and non-state actors (Gray and Davis, 2006).

Other analysts believe that the use of nuclear weapons as a means to achieve political goals is of questionable validity. Following this view, the possession of nuclear weapons does not seem to have secured any major diplomatic advantage for the countries that possess them. According to Bundy, for instance, atomic weapons have only one "valid and necessary role, namely deterrence against nuclear attacks by other countries" (Bundy, 2006). Examples used to support this argument would include the failures of Russia in Afghanistan, the US in Vietnam and Israel in Lebanon. Along these lines of reasoning, there would be a reluctance of non-nuclear countries to manufacture such weapons, since the political benefits would be small in relation to the political and economic costs involved in their development (Creveld, 1991). As such, nuclear weapons have served to contain armed conflict between the two superpowers, and their possession by other countries would only help to freeze conflicts between them, as in the case of border disputes between China and the ex-USSR.

Yet, even those who defend the reduction or non-development of nuclear weapons to achieve political objectives acknowledge that part of the status that nuclear powers enjoy in the international arena stems from nuclear weapons possession (Creveld, 1991). Coincidentally or not, all permanent members of the UN Security Council are nuclear powers, and all other nuclear weapons possessing countries form a group that is, in a sense, treated in a special way in the international arena. The possession of nuclear weapons is always an element that distinguishes this group from the rest. No one is saying that the simple fact of possessing such weapons will translate into direct benefits, but rather that this possession is certainly noted by other countries.

Given that nuclear weapons have not been used since 1945, even against countries with no nuclear weapons, some authors argue that there is a "taboo" that restricts their use, whether due to a rational or normative motive. A normative element would

be the generation or development of a nuclear “taboo” that has come to exist regarding the use of such weapons, which have become stigmatised in such a way that even when militarily advantageous, their use as weapons of war is not considered legitimate. This normative view maintains that the “taboo” has contributed to the non-use of these weapons, contesting the realist view of the non-use of nuclear weapons based primarily on material factors (Tannenwald, 2007).

Paul, on the other hand, prefers to analyse the subject as a tradition. The lack of political will to use nuclear weapons can be partly attributed to a normative tradition of “non-use” that developed over time, based on two factors: (1) the impact any destruction would cause; and (2) the adverse effects on a country’s image its use would cause. Although the logic of consequences is the primordial factor for “non-use”, the normative prohibition – reinforced by certain vocal parts of global public opinion – interplay in such a way as to strengthen the tradition of “non-use”. Although this tradition appears to have emerged from an acknowledgment of the different nature of nuclear weapons, i.e. their capacity to bring about swift destruction when compared to conventional weaponry, it was also partly “invented” to serve US and Soviet interests in order to prevent nuclear proliferation, helping them secure legitimacy for the monopoly of these arms (Paul, 2009).

Nevertheless, regardless of the theory – be it the realist analysis related to nuclear deterrence, or the normative one, considering the existence of a “taboo” or a tradition” – each and every one has difficulty in explaining the issue of non-use of nuclear weapons. Those supporting the normative analysis have difficulty, for example, explaining what the weight of the “taboo” is when compared to other factors: the guidelines for potential use of nuclear weapons as set out in the strategies and nuclear war planning of nuclear weapons states; the limited reactions from the international community in relation to North Korea; the nuclear agreement between India and the US; and nuclear exceptions granted to India by the nuclear Suppliers Group in 2008 (Potter, 2010).

## Nuclear Arms and Armed Conflict

Nuclear weapons have contributed to avoid armed conflict between states holding such weapons. Among these countries, the possibility of a conventional war is reduced by the fear that any escalation of conventional fighting could lead to nuclear conflict. As noted by Waltz, any such state is deterred by others who have the ability to respond to the initiative of a nuclear aggression. However, things are so simple when states possessing nuclear weapons are involved in a conflict with others that do not.

The possession of nuclear weapons by a state does not always guarantee the deterrence against attack from a country that holds only conventional weapons. For instance, the possession of such weapons by Israel, which according to some sources had been

<sup>11</sup> The taboo theory defended by Tannenwald is related to the anthropological definition of the term, which would have an explicit normative aspect and a stronger sense of obligation than exists in a tradition. On the other hand, Paul defends the theory of tradition, considering that there is no ban on the use of nuclear weapons and that plans for the use of such weapons exist, drawn up by the countries that possess them.

developed with French aid in the sixties, did not deter the attack led by Egypt and Syria in the Arab-Israeli war of 1973 (Creveld, 1991). On the other hand, the possession of nuclear weapons does serve to limit conflicts, as happened in this same confrontation when Egypt and Syria made no attempt to move beyond the previously established border lines of the Sinai and the Golan Heights, possibly for fear of the use of nuclear weapons by Israel (Creveld, 1991). Similarly, during the first Gulf War, both the US and Israel used the threat of use of nuclear weapons against Iraq as a way of deterring Saddam Hussein not to resort to using chemical and biological weapons which, according to them, Iraq was in possession of (Payne, 1995).

Considering the premise that nuclear weapons limit a conflict, their proliferation could also inhibit action from current nuclear powers against countries that today have only conventional weapons. The policy of pre-emptive strikes, for example, would tend to be limited by the spread of such weapons among other countries. The case of Iran serves to illustrate this situation. The pursuit of nuclear weapons by the Iranian government, in addition to meeting its strategic objectives of regional leadership, would also be a way to hinder a possible intervention against the country: Iran finds itself concerned with the military cooperation occurring between Gulf States and the US and sees itself surrounded by the presence of US troops in the region as well as under strong political pressure from the US government.<sup>12</sup>

Equally, the case of Iraq cannot be forgotten, which had its nuclear programme stopped by an Israeli pre-emptive attack in 1981, which somewhat eased the US-led military invasions against that country. If Iraq had nuclear weapons, intervention in the Gulf would probably have been more difficult for the coalition members (Posen, 1997).<sup>13</sup> Some analysts even believe that the possession of such weapons by Iraq, with their ability to reach any member country of the coalition, would certainly have avoided the recent war (Creveld 2004). Similarly, other analysts say if Ukraine had not surrendered the nuclear weapons it had inherited from the Soviet Union, Russia would not have ventured to annex Crimea.<sup>14</sup> Also contributing in favour of this argument is the fact that nuclear weapons are cheaper, easier to produce and more powerful compared to more sophisticated conventional weapons. Countries like Pakistan and North Korea, who have no great technological development or financial resources, were able to develop nuclear weapons.

There is, however, the risk that nuclear weapons possession could lead regional nuclear powers to feel free to intervene regionally against countries that do not possess such

<sup>12</sup> Document of the US Department of Defense, November 1997 already listed some of these reasons for Iran's interest in maintaining its nuclear program, which began in 1970, at the time that the Shah was in power ..

<sup>13</sup> Barry R. Posen, in his article US Security in the Nuclear-Armed World. *Security Studies*, v.6, n.3, p.5, Spring 1997, develops a case study considering the hypothesis of Iraq having nuclear weapons when it came to the invasion , in order to analyse what would be the best strategy for the United States to deal with this threat.

<sup>14</sup> Argument presented in the following articles: Crowley, Michael. Do not worry, Ukraine won't go nuclear. *Time*. [www.time.com/21934/ukraine-crimea-russia-nuclear-weapons](http://www.time.com/21934/ukraine-crimea-russia-nuclear-weapons). Accessed on 05/08/2015 ; Zurcher, Anthony. Ukraine's nuclear regret. *BBC*. [www.bbc.com/news/blog-echochambers-26676051](http://www.bbc.com/news/blog-echochambers-26676051). Accessed on 05/05/2015; John Mearsheimer argued in 1993 that Ukraine should not give up its nuclear weapons in order to maintain peaceful relations with Russia, in order to prevent the Russians trying to regain the country. The author said: "Ukrainian nuclear weapons are the only reliable deterrent to Russia aggression. If the US aim is to enhance the stability in Europe, the case against a nuclear-armed Ukraine is unpersuasive." Mearsheimer, John. *Ukrainian Nuclear Deterrence*. *Foreign Affairs*, Summer 1993.

weapons, with the purpose of promoting their own national interests (Posen, 1997). The recent annexation of Crimea by Russia is a good example of the influence that nuclear weapons play in world politics. Russia's possession of such weapons can certainly be seen as a major factor when considering that the United States' and other NATO members' condemnation of Russia's actions did not escalate into a military conflict. Recently, President Vladimir Putin has contributed to heighten tensions over Crimea by asserting repeatedly that Russia may install nuclear weapons in this region, sparking threats from NATO countries of a possible intervention.

In summary, from the analysis of several authors, one may conclude that nuclear weapons do play an important role in the international arena and are related to the distribution of power and the maintenance of world order. Besides their potential for being used as an element of internal cohesion and national pride, they can help to prevent aggressions to one's territory and limit conventional conflicts. The possession of such weapons increases a country's importance in the international arena and expands its ability to influence decisions to further its own interests. On the other hand, other authors assert that the possession of these weapons is not so important since the supposed nuclear deterrent was not a relevant contribution to the peace that prevailed during the Cold War era, and that the capacity of these weapons to ensure limited political objectives has not been proven. They consider that a "taboo" or a tradition of non-use of nuclear weapons prevails.

In addition to states, there is the widely reported concern that nuclear weapons could be used by terrorists. For these groups, the issue of "taboo" of non-use would not apply. Bull, in his 1977 article already warned of the possibility of the use of nuclear weapons by non-state actors. The issue gained momentum when the breakup of the Soviet Union increased the probability of weakening the control over these weapons. The issue gained greater prominence with the terrorist attacks of September 11, 2001, with the focus on Al Qaeda, and with the discovery in 2003 that the Pakistani scientist A.Q. Khan had run an illicit nuclear network for more than 15 years and had sold nuclear technology to North Korea, Iran and Libya. According to some authors, the question was no longer related to whether or not nuclear weapons would be used, but rather, when this would occur (Allison, 2004). Others, however, such as Robin M. Frost, believe this threat is not as great as has been proclaimed (Sidhu, 2008: 370).

Although this possibility does indeed exist – increasingly so as vertical and horizontal proliferation heighten – it seems remote, at least in the near future. The more likely scenario is the commercial use of radioactive materials for the making of a "dirty bomb" whose effects are extremely limited when compared with the potential destruction wreaked by a nuclear device. To date, the most widely known non-state attack using so-called "weapons of mass destruction" was carried out by the religious group Aum Shinrikyo in the Tokyo underground. However, even with the aid of scientists, special facilities and financial resources, the group was never able to produce large amounts of sarin gas, nor carry out an attack with a vast number of casualties (Sidhu, 2008).

In a way, associating nuclear weapons to terrorism serves the interests of nuclear states, who wish to maintain the oligopoly of such weaponry. This position is reinforced by Sagan's argument that developing countries would be unable to maintain safe control of nuclear weapons. The possibility and risk of nuclear terrorism is thus increasingly exploited as a way to prevent horizontal proliferation without tackling nuclear disarmament.

## **Disarmament and Non-Proliferation: Rhetoric and Practice**

The question as to the effectiveness of the NPT provokes controversy. Some analysts think that the Treaty has achieved positive results, as only four countries have developed nuclear weapons since 1968 – Israel, Pakistan, India and North Korea, and the first three are not signatories to the treaty, while North Korea withdrew in 2003. Moreover, there was a reduction in the number of warheads, nuclear programmes and number of countries with nuclear weapons (South Africa, Belarus, Kazakhstan and Ukraine). On the other hand, some analysts view the Treaty as ineffective because it did not forbid other countries from becoming nuclear powers, nor was it successful in ensuring nuclear disarmament (Sidhu, 2008: 362).

Nevertheless, when considering the set of instruments relating to nuclear proliferation, there are good and bad indicators. On the one hand, there are negotiations, such as the Humanitarian Impacts of Nuclear Weapons Initiative, the new arms reduction agreement reached between the US and Russia and, more recently, the signing of the agreement between the P5+1 (Germany) and Iran, which restricted the Iranian nuclear programme to prevent the use of nuclear technology for military purposes. On the other hand, there are a number of factors and events running counter to this trend: namely, increasing reliance on nuclear weapons in the defence strategies of some nuclear countries in order to reduce vulnerabilities; increased refinement and acquisition of new nuclear weapons; the US's legitimising of India's nuclear programme; the lack of progress in compliance with the Action Plan established at the 2010 NPT Review Conference; and the failure of the last conference in 2015, which ended without a final document for lack of consensus. In addition, the increase in tension between Russia and the United States since the annexation of Crimea has been paralysing the actions of the new Strategic Arms Reduction Treaty (START) and generating accusations and threats from both sides, which has led some analysts to state that we are now entering a new Cold War.

Failure by nuclear weapons states to implement Article VI of the NPT, which establishes the commitment to nuclear disarmament, is a problem that contributes to proliferation. Following the negotiations for the NPT, there was a lack of interest from the US and former Soviet Union in nuclear disarmament, and the article turned out to be very ambiguous regarding both timing and form of its implementation. There was, to a degree, interest in preventing proliferation, and the NPT can be considered as a treaty that envisages such a goal within its scope. But it is not a disarmament treaty – rather one of non-proliferation, and for some this is how it should be maintained (Krause, 2007). The indefinite extension of the treaty, as agreed at the 1995 Review Conference, without fixing a date for definitive disarmament, corroborates the view that the NPT is not focussed on disarmament.

It could be argued that if nuclear powers do not implement Article VI, it is because there are political and strategic advantages in not doing so. Furthermore, when states like India, Pakistan and Israel, which did not sign the treaty, developed nuclear arsenals they did not face any major problems or international sanctions. On the contrary, sanctions which had been imposed on Pakistan and India in 1998 in response to the nuclear explosions they conducted – were lifted. In the case of Israel, which until now has not faced any condemnation or sanctions, the world powers practice a policy of silence. Pakistan was made a partner of the US in the “war on terror” and even the finding that revealed Pakistani scientist A.Q. Khan had sold nuclear secrets to Iran, Libya and North Korea caused no major problems for Pakistan. Pakistan and India have commercial agreements in the nuclear field with China and the US, respectively. These include technology transfers, something that – theoretically – should not have been permitted as Pakistan and India have not joined the NPT. Moreover, since the signing of the agreement with India in 2005, the United States campaigned for the Nuclear Suppliers Group (NSG) to permit exportation of nuclear technology to India and is currently leading efforts for the NSG to accept the country as a full member. All these measures demonstrate an acknowledgment of the nuclear status of these countries, which weakens the provision set out in the NPT (Plum Nascimento, 2015).

President Obama’s speech in Prague was not confined solely to the topic of non-proliferation, but also broached disarmament and suggested the possibility of a world without nuclear weapons. This raised hopes that measures would be taken for the implementation of Article VI. The speech gave new impetus to the nuclear non-proliferation regime, with a change in strategy from the previous government. This change provided momentum going into the 2010 NPT Review Conference, hoping to break the deadlock that was experienced at the 2005 conference when the meeting ended with no final document due to lack of consensus. It was hoped also that the declarations could advance the implementation of the 13 steps for disarmament, established at the 2000 Conference, but that has not advanced significantly.

Following the guidelines set out in Prague, the United States undertook a number of initiatives in 2010 to put the speech into practice. In April, the US published a document containing a revision of its nuclear posture. That same month, a Nuclear Security Summit was held in order to draw attention to the risk of nuclear terrorism and advance a common approach to nuclear safety. Finally, in December, Russia and the United States signed the New START, which will last 10 years, and amongst other things, provides for a 74% reduction in existing nuclear warheads<sup>15</sup>.

In the same year, during the Revision Conference for the Treaty on Non-Proliferation of Nuclear Weapons, the signatory states agreed on a plan of action which provided 64

<sup>15</sup> The main points of the new START are: 1. Reduction of nuclear warheads that both countries have the 1,550 respectively; 2. Limiting to 800 the number of intercontinental missiles on board submarines and warplanes, or otherwise mobilised, for each of the two countries; 3. Limiting to 700 the number of intercontinental missiles aboard submarines and bombers positioned; 4. verifications of nuclear facilities, data exchange, as well as reciprocal notification of offensive weapons and nuclear sites; 5. Duration of 10 years and may be renewed for a maximum duration of five years. A clause provides that either party may withdraw from the treaty. The treaty does not impose on the US any limitation on testing, development or installation of missile defence systems planned or currently underway. For more details see: <http://www.state.gov/t/avc/newstart/index.htm>, accessed on 05.08.2015.

steps to be adopted in the areas of non-proliferation, disarmament and peaceful use of nuclear energy, and 22 actions that were aimed at nuclear disarmament.<sup>16</sup>

Progress in relation to nuclear disarmament however, stopped there. In fact, nuclear-weapons states have been seeking to improve their nuclear capabilities. In the case of the US, Obama's speech in Prague and the subsequent revision of the US' nuclear posture consolidating some of the president's ideas, shows – when examined more carefully – that the mention of disarmament is in fact used as an implement to strengthen the priorities of the US government: non-proliferation and prevention of nuclear terrorism. The document states that “as long as nuclear weapons exist, the United States will maintain a safe, secure and effective arsenal, both to deter potential adversaries and to assure US allies and other security partners that they can count on the security commitments undertaken by the United States” (USA, 2010). Ensuring the general maintenance of nuclear weapons, to which the President and the official document make reference, has already resulted in a large scale programme to develop and modernise nuclear arsenal at an estimated investment of US \$348 billion for the coming decade according to a report by the US Congressional Budget Office.<sup>17</sup> Among the planned purchases are 12 nuclear submarines, 100 nuclear capable bombers, 1,100 cruise missiles and 400 nuclear intercontinental ballistic missiles.<sup>18</sup>

The United States is not alone in this movement. In June 2015, Russian President Vladimir Putin announced that Russia would add 40 new intercontinental ballistic missiles to its arsenal this year. China has invested heavily to boost its response capacity to a nuclear attack, having recently decided to adopt multiple independently targetable re-entry vehicle ballistic missiles (MIRVs), which allow for multiple nuclear warheads to be placed on a single missile, and can thereby reach different targets. The other nuclear powers also follow this doctrine of nuclear reequipping. The UK's decision to upgrade its Trident system means that their nuclear capability will be maintained until at least 2050 (Sidhu, 2008). France is in the final stage of its nuclear arsenal upgrade programme that involves the modernisation of submarines and aircraft loaded with nuclear warheads, as well as the production of new nuclear missiles. Like China, India too is developing MIRVs, in addition to new missiles and nuclear submarines. Pakistan is developing ballistic missiles, cruise missiles and systems to launch its warheads.

If in the physical realm President Obama's speech was not followed up by action, this has equally not occurred in the political realm. The Disarmament Conference remains paralysed. This political inaction is seen in the prolonged deadlock on developing a treaty to reduce fissile materials; the prevention of the arms race in outer space; and the negative security assurances (NSAs) going nowhere. Pakistan maintains there will be no progress in the negotiations until there is progress in the area of disarmament, an issue which has

<sup>16</sup> Action Plan adopted at the NPT Review Conference in 2010. Available at: [http://www.un.org/ga/search/view\\_doc.asp?symbol=NPT/CONF.2010/50%20\(VOL.I\)](http://www.un.org/ga/search/view_doc.asp?symbol=NPT/CONF.2010/50%20(VOL.I)). Accessed on 05/08/2015.

<sup>17</sup> Projected Costs of US Nuclear Forces, 2015 to 2024. Available at: [www.cbo.gov/publication/49870](http://www.cbo.gov/publication/49870)

<sup>18</sup> National Defense Authorisation act for fiscal year 2016. Available at: <https://www.congress.gov/114/crpt/srpt49/CRPT-114srpt49.pdf>

been obstructing progress at the meetings. The CTBT's entry into force is another issue addressed in the Prague agenda, but that too has not evolved. After almost 20 years since the signing of the treaty, the United States and China have not ratified it, while India, Pakistan and North Korea have not yet even become signatories.

All this evidence shows not only that the objective to reduce the role of nuclear weapons was not achieved, but how these weapons still hold a prominent role in the security strategies of nuclear powers. The distinguished Obama speech, however well-intentioned, did not translate into practical action. The document on nuclear posture, following the statement, uses the term disarmament in an instrumental manner to advance US interests. The lack of consensus at the last NPT review conference, held in May 2015, demonstrates that the exaltation surrounding the US President's address took on exaggerated dimensions and should have been analysed with more moderation, realism and pragmatism.

The existence of nuclear weapons states outside the NPT is another compromising factor for disarmament and for the legitimacy of treaty itself. The situation of North Korea, India, Israel and Pakistan, accepted in the nuclear club without having been required or strongly compelled to sign the NPT strongly undermines the document. The NPT-recognised nuclear weapons states may use the existence of these countries to justify non-implementation of the disarmament provision set out in Article VI. At the same time, the existence of these four nuclear weapons states outside the NPT is detrimental to non-proliferation.

Recently, the member countries of the Humanitarian Initiative group have promoted the idea of a convention to ban nuclear weapons. As this proposal has not been supported by the nuclear weapons states, the possibility is being debated of signing the convention, even without the participation of the latter. This alternative would be a way of compelling the nuclear powers and strengthening the norm against the use of atomic weapons.<sup>19</sup>

As can be seen from the considerations above, although the possibility of disarmament may have been exalted after Obama's emblematic speech in Prague, it is nonetheless a remote goal. The problem is that nuclear weapons exist and even if they were extinct, nuclear know-how attained cannot be reversed. Even the use of such weapons – which for many seems unlikely (whether due to the nuclear “taboo” or to the tradition of “non-use”) – is a possibility, some analysts note, that cannot be ruled out. Countries seek to achieve political objectives; avoiding a nuclear war is just one of them: and

<sup>19</sup> During the 2010 NPT Review Conference, some countries of the international community expressed concern at the humanitarian dimension and impact of the use of nuclear weapons. During the meetings of the Preparatory Committee for the 2015 Review Conference, held in 2012, 16 countries, including South Africa, Austria, Chile, Costa Rica, Denmark, Egypt, the Philippines, Indonesia, Ireland, Malaysia, Mexico, New Zealand, Nigeria, Norway, Switzerland and the Vatican, submitted a joint statement expressing the urgency of eliminating nuclear weapons completely and irreversibly. In the same year, Algeria, Argentina, Bangladesh, Belarus, Brazil, Kazakhstan, Colombia, Ecuador, Marshall Islands, Iceland, Liechtenstein, Malta, Norway, Peru, Samoa, Sierra Leone, Swaziland, Thailand, Uruguay and Zambia joined others 16, and issued a similar statement at the UN General Assembly. In 2013, during the preparatory meetings for the NPT Review Conference, the group had a membership of 80 states and later that year, already totaled 125. There were three conferences held on the humanitarian impact of nuclear weapons, one in 2013 in Norway, and two in 2014, one in Mexico (February) and one in Austria (December). For more information, see: [http://www.armscontrol.org/ACT/2015\\_0708/Features/The-2015-NPT-Review-Conference-and-the-Future-of-The-Nonproliferation-Regime](http://www.armscontrol.org/ACT/2015_0708/Features/The-2015-NPT-Review-Conference-and-the-Future-of-The-Nonproliferation-Regime)

there is no infallible way to prevent this. Furthermore, the development of the precision mechanisms of missiles could contribute to the limited use of nuclear weapons against specific targets (Martin, 1982. PP: 3-7).

The commitment to non-proliferation therefore loses credibility due to the inconsistency between the possessor states' discourse and measures implemented on a real-world level. However, if disarmament seems a distant dream, we are nonetheless at a defining moment in world history regarding non-proliferation. To thrive requires that other countries believe that not possessing nuclear weapons is in their interests.

## **The Future of Nuclear Arms**

What will be the future of proliferation? Considering the above analysis of several authors' points of view on the matter, one is able to gain a notion of the context and the pros and cons regarding the pursuit of nuclear weapons. At least four possibilities present themselves.

The first would be that of total nuclear disarmament. Nuclear weapons states convinced of the need to abolish these weapons, would establish mechanisms for disarmament, as called for in Article VI of the NPT, as would the nuclear weapons states that remain outside the treaty. This possibility is highly unlikely, since – as discussed earlier – there is no political will in such countries to give up a powerful tool that affords them such a privileged political-strategic position, contributing to their security and status in the international arena and which is, moreover – according to some authors – fundamental to maintaining world order.

In truth, nuclear weapons states have reaffirmed the importance of this weaponry for their national security policies and sought to modernise their arsenals. President Obama's address and the reference, in 2010, to the possibility of a US nuclear policy review could be seen to favour disarmament. However, there are many obstacles to overcome: the internal difficulty to unilaterally advance this position; the political and strategic commitments to countries protected under the US nuclear umbrella; the difficulty to convince other nuclear powers to disarm; and the complexity of the mechanisms required for verification of compliance. These are all obstacles that will be difficult to overcome as there will always be uncertainty as to the degree of commitment of the participants.

The second possibility is one of widespread proliferation, in which a large number of countries seek to develop nuclear weapons. However, as most countries lack the political will and the economic and technological capacity to develop such weapons, this scenario is also unlikely. As previously mentioned, political will, which is the most important factor, is subject to the influence of both domestic and international pressures. Historically, the number of countries that have become nuclear weapons states has been small, whether due to external pressures or domestic issues. With frequent internal resistance, financial globalisation, external pressure and the strategy of offering economic and political advantages in return for renouncing or relinquishing nuclear weapons, it is likely that this tendency will continue and that most countries will not be tempted to pursue the nuclear option.

The third possibility would be the maintenance of the status quo, in which only the current nuclear powers may hold such a status, freezing the current global stage. This scenario, although more probable than the first and second, is by no means easy to achieve. Historically, proliferation does occur and the number of countries with nuclear weapons increases, albeit slowly, over time. There are however certain identifiable factors that may contribute to the likelihood of this third scenario: domestic factors related to the phenomenon of the spread of democracy; increased participation of groups opposed to such weapons; more acute pressures to counter international proliferation, including via the use of sanctions as seen in case of Iran; the continued strategy of providing economic advantages and military cooperation as compensation for abandonment of nuclear programmes; and, lastly, the international conjuncture, wherein the US has a superior military and nuclear status, allowing them to negotiate on the issue of nuclear weapons from a privileged position. As such, the US government can afford to make “concessions” reducing its nuclear arsenal, using the lure of disarmament in the “long term” in order to ensure horizontal or vertical non-proliferation. Tags such as “nuclear terrorism” and “untrustworthy country” are used to strengthen arguments against horizontal proliferation.

Despite these factors, there are several others which contribute, conversely, to proliferation – such as the ever increasing technological ease with which nuclear weapons are developed. First, a sense of insecurity some non-nuclear countries feel, created by the banality of the threat of the use of force, following the end of the Cold War. Second, recognition of the political-strategic importance of this weaponry, acknowledged even by the countries that have them and that continue to develop new options for their use. Third, an observation of the international acceptance of countries that have gone on to develop nuclear weapons, such as India, Pakistan and Israel, which in addition to not suffering retaliation, have improved their security and status once becoming possessors of such weapons. Moreover, other than Israel, which is traditionally an ally of the US government, India and Pakistan were also elevated to the status of US strategic partners. Accordingly, although the scenario of maintaining the status quo is the most likely in the short term, if disarmament does not occur, a fourth possibility presents itself.

The fourth possibility is one of selective proliferation. In this scenario, countries with the political will and economic and technological capabilities would act against international pressure and adverse domestic factors in order to join the existing nuclear powers. Such an enterprise would be undertaken in the pursuit of improved status and security. These countries might also simply attain the know-how required to be able to produce nuclear weapons at short notice, so as to be prepared should the international situation so demand it. Contributing to the likelihood of this scenario is the fact that some countries are unlikely to be willing to forego the development of nuclear programmes for peaceful purposes, as permitted by the NPT, particularly while the possibility of the depletion of oil reserves spurs the pursuit of alternative energy sources, of which nuclear energy is one. With more and more countries interested in mastering the nuclear fuel cycle, the possibility for further nuclear military developments also increases.

The US has historically led anti-proliferation efforts, so it can be assumed that great pressure will be put on countries wishful of attaining nuclear status. Nevertheless, the US

anti-proliferation policy comes at a cost, and this cost is proportional to the political will of the state which aspires to become a nuclear power. Thus, it cannot be ruled out that the US government may consider that a selective nuclear proliferation policy meets its interests in certain cases. In fact, despite the efforts against nuclear weapons, it was extremely difficult in the second half of the twentieth century to prevent other states from developing such weaponry when they had the determination and political will to do so. The case of Pakistan and India are examples of this difficulty. India spent more than 30 years under US sanctions, but never gave up its nuclear programme. Furthermore, since 2005, it has been granted the status of strategic partner by the US, which has even pointed out that “as a responsible state with advanced nuclear technology, India should acquire the same benefits and advantages of other such states” (USA, 2005).

## Conclusion

The political-strategic role of nuclear arms consists of two main components. The first, related to the power and status of the countries that possess them. The possession of such weaponry is a factor that distinguishes nuclear weapons states from the others. This factor can be used as bargaining power to influence behaviour and decisions in the international arena, and domestically to instil national pride. The second relates to a state's security. The nuclear deterrent capability discourages aggressions between nuclear powers and can contribute to limiting conventional conflict between these powers and those that possess only conventional weapons. This being said, the possession of nuclear weapons has not always guaranteed success when the powers that possess them fight for goals that are not vital to these same powers. Moreover, there is a stigma regarding these weapons and opposition to their development from domestic sectors and international public opinion.

The end of the Cold War brought with it new variables. Instead of policies that aim at disarmament, as called for by the NPT, nuclear powers have reaffirmed the importance of such weapons for their own national security policies. Article VI of the NPT states that “each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.”<sup>20</sup> 45 years after the NPT entered into force, there is still no “near date” for the end of modernisation and development of new nuclear arms, and negotiations between the nuclear disarmament treaty states are non-existent.

The possibility of the emergence of new nuclear powers following the expiration of the agreement led to the decision to indefinitely extend the NPT, made at 1995 Review Conference; however this possibility inevitably ended the incentives nuclear states had to disarm. Aware of the absence of a framework for disarmament, states party to the treaty decided at the 2000 Review Conference to include a reference in the final document to the obligation for “a diminishing role for nuclear weapons in security policies

<sup>20</sup> Nuclear Non-Proliferation Treaty. Article VI. Available at [http://www.planalto.gov.br/ccivil\\_03/decreto/d2864.htm](http://www.planalto.gov.br/ccivil_03/decreto/d2864.htm). Accessed on 05/08/2015.

to minimise the risk that these weapons will ever be used and to facilitate the process of their total elimination.”<sup>21</sup> This commitment was again reaffirmed at the 2010 Review Conference, but, as discussed throughout this article, little has been done to reduce the role of nuclear weapons in the security policies of nuclear weapons states. The 2015 Review Conference could have been a valuable opportunity to renew commitments with the new START, to give new impetus to the implementation of the Action Plan established in the 2010 conference and to advance the 13 steps for nuclear disarmament agreed upon in 2000. However, there was the same lack of consensus seen at the 2005 conference.

Even if disarmament does not move forward in practice, Obama’s speech and the revision of the US’ nuclear posture have made a contribution, inasmuch as the mentioning of a world without nuclear weapons is being used instrumentally to advance the goals of non-proliferation. If on the one hand, countries that do not have such weapons observe increasing international pressure to restrict the option to develop nuclear programmes for peaceful purposes ensured under the NPT, on the other, they note that countries that have recently developed nuclear weapons are accepted without any major problems by the other members of the club, further affecting the credibility of non-proliferation policies.

It is therefore likely that the discourse of “future disarmament”, allied with the propaganda about the risk of nuclear proliferation by supposedly “untrustworthy states” and/or terrorist groups will be used to boost measures taken against horizontal proliferation, and offered in exchange for some limitations on vertical proliferation that won’t compromise the effectiveness of nuclear weapons. In this case, there may be a strengthening of the NPT and other international mechanisms and institutions linked to the control of proliferation, without any consideration of disarmament.

The recent agreement signed with Iran confirms this analysis. The agreement is another legal mechanism that strengthens nuclear non-proliferation, establishing limitations on the Iranian nuclear programme and setting dates by which demands are to be met. In exchange, Tehran receives an end to sanctions against the country. The word ‘disarmament’ is only mentioned once in the text, and even then, it is merely to say that the parties signing the document recognise the NPT as the foundation of the non-proliferation regime and the essential foundation for the pursuit of disarmament and peaceful uses of nuclear energy.<sup>22</sup>

The strengthening of measures to prevent new countries from developing nuclear weapons and the success concerning the Iranian programme could indicate that proliferation will be contained and the status quo kept. Yet, as discussed above, the future of proliferation is complex. While it is difficult to predict what the dynamics will be,

<sup>21</sup> Final Document of the NPT Review Conference 2000. Available at [http://www.nti.org/media/pdfs/npt2kfd.pdf?\\_=1316544426](http://www.nti.org/media/pdfs/npt2kfd.pdf?_=1316544426). Accessed on 08/13/2015.

<sup>22</sup> Agreement signed between Iran and Germany, China, United States, Russia and the United Kingdom on 14 July, 2015. Available at <http://apps.washingtonpost.com/g/documents/world/full-text-of-the-iran-nuclear-deal/> / 1651 / Accessed on August 13, 2015.

the trend is for some countries in the long term to seek to develop nuclear weapons, or at least, to acquire the know-how required to produce them at short notice when and if the international situation demands it. Should this process of selective nuclear proliferation occur, then disarmament will not. The speed of this process would be conditional on three factors: the effectiveness of the pressure applied by domestic sectors; international pressure; and the technological and financial capacity of nuclear power aspiring countries. In this context, the Iranian deal could be viewed as just a circumstantial matter that does not change the structural aspects related to the possibility of proliferation.

Nuclear weapons are a reality in the international arena and their existence influences the political-strategic environment and the dynamics of international relations. The destructive potential of this weaponry has led some analysts to believe that war can no longer be “the continuation of politics by other means”, as defined by Clausewitz. The disproportion between the destructive power of nuclear weapons and the value of the majority of political ends would inhibit war. The truth is that nuclear weapons have not been used since 1945. And the world has not lived through any “major war” since then, despite the many conflicts that continue to plague our planet. Whether they contribute or not to peace, or should be extinct or not, nuclear weapons continue to be important issues to be debated. The new US position on disarmament appeared to provide a glimmer of hope towards a world devoid of nuclear weapons. However, this hope is fading, and while it does not materialise, and the genie does not return to the bottle, we are destined to coexist, for the foreseeable future, under the shadow of nuclear weapons.

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