

"Neo-nuclear Proliferation" in the midst of the deteriorating geopolitics: a Neo-realism Review

"الانتشار النووي الجديد" في خضم التدهور الجيوسياسي: مراجعة واقعية جديدة

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Abstract

In the light of escalating geopolitical crises, major powers are significantly enhancing their quantitative and qualitative nuclear capabilities with new determinants and objectives, and in the context of the absence of frameworks governing nuclear proliferation as a result of the current manifestations of “anarchy” in the global political system. From the perspective of the neo-realism theory and the concepts it proposes, this study aims to analyze current nuclear proliferation and explore its determinants, relying on the qualitative approach and content analysis. The study concludes that there are a number of new features of current nuclear proliferation, which are likely to continue in the coming years in light of the Change of Great Power status in international system and the rise of actors that have increasing influence in that system. The paper also argues that these features may be reflected in the assumptions of new realism and contribute to its development.

Key words: Nuclear Proliferation - Neorealism - Security Dilemma – Self-help - deterrence – nuclear-industrial complex

مستخلص

في إطار الأزمات الجيوسياسية المتصاعدة، تعمل القوى الكبرى على تعزيز قدراتها النووية، سواء الكمية أو النوعية، بشكل كبير، وذلك في ضوء مُحددات وأهداف جديدة وفي ظل غياب الأطر الحاكمة للانتشار النووي نتيجةً لمظاهر الفوضى التي تشهدها السياسة الدولية في الوقت الراهن. ومن منظور النظرية الواقعية الجديدة والمفاهيم التي تطرحها، تستهدف تلك الدراسة تحليل الانتشار النووي الحالي واستكشاف محدداته، بالاعتماد على المنهج النوعي. وتستنتج الدراسة أن ثمة عددًا من السمات الجديدة للانتشار النووي الراهن، والتي من المُرجح أن تستمر وتتبلور في السنوات المقبلة في ظل الحراك بين القوى العظمى، وصعود جهات فاعلة ذات تأثير متزايد في النظام الدولي خاصةً من منظور القوة العسكرية. وتزعم الورقة أيضًا أن تلك السمات قد تنعكس على افتراضات الواقعية الجديدة وتسهم في تطويرها.

الكلمات المفتاحية: الانتشار النووي - الواقعية الجديدة - معضلة الأمن - المساعدة الذاتية - الردع - المجمع

الصناعي النووي

Introduction

The nuclear weapons threats are resurging amid the geopolitical deterioration and uncertainty that prevails in the international politics. Since 2022, the globe has witnessed an increasing nuclear proliferation in a manner not seen since the Cold War peak, as the known nine countries have nuclear arsenals continued to foster their nuclear arsenals, and Some of these countries have deployed new nuclear-armed weapons systems in 2023. Although the number of these weapons is still below the height of cold war, the current nuclear proliferation implies new characteristics the study will show and clarify, in the light of the neo-realism theory assumptions.

The research problem and questions of the study

The study seeks to interpret the context of current nuclear proliferation era. It also sheds light on the objectives of this proliferations as well its new patterns. The study tests the structural realism theory assumptions in this regard, as the nuclear threat has become more widespread, nuclear power has begun to move in different qualitative paths, and the capabilities of the superpowers to control arms race have declined, while mechanisms to control the spread of weapons of mass destruction have comparatively disappeared in the international politics.

Accordingly, the main question of the Study is: **Why has the nuclear proliferation increased in a new manner since the geopolitical deterioration has sparked in 2022?**

This question could be answered through number of sub-questions like:

- 1- What are the current anarchic international system key features stimulate nuclear proliferation increasing?
- 2- What are the changes in the main powers' nuclear doctrine that define neo-nuclear proliferation?
- 3- What are the Neo-nuclear features and determinants in the context of neorealism assumptions?

The Scientific significance of the study

1- The theoretical significance

In light of the increasing nuclear proliferation and associated threats, in addition to their impact on international peace and security and international relations dynamics; The theoretical significance of the study lies in its analysis of the neo-realism theory assumptions in the context of nuclear proliferation the global witness due to the "security dilemma". The study seeks to discover the new determinants of some

concepts like “self-help” and “latent power”. The study explores the political dynamics between great powers as “the major actors in international politics” through the lens of nuclear capabilities, and within the context of the transformation of those states’ technological, economic, and military capabilities.

2- The practical significance

The practical significance of the study lies in its analysis of the dimensions and reasons of neo-nuclear proliferation as it poses major threats to all powers, especially in the midst of the widespread and ongoing armed conflicts, failure of nuclear diplomacy, and the emergence and possibilities of the emergence of effective nuclear powers. The study focuses on the three major superpowers, the United States, China and Russia, that imposes significant effects on international security, and determines the trends of nuclear armament, its causes and how to deal with it. The significance of the study also appears as it addresses the role of non-state armed groups in the new nuclear landscape because of its growing role in international politics from the perspective of military power.

Theoretical Framework

This study is presented from the neo-realism “Structural realism” perspective, as the neorealism theory provides an interpretive framework to explain the current nuclear proliferation and nuclear deterrence strategies. According to neorealists, the international politics is synonymous to power politics, great powers are the main actors due to their possessing to the required economic and military power. and all countries are assumed to be alike because of Structural realist ignores the cultural and political differences among states¹.

For neorealists, the structure of the international system is the engine of states endeavors to gain power, as there is no higher authority or guarantee that one state won’t attack another. Thus, every country seeks to maximize their own power to protect itself in this anarchic system. At the same regard, the Structural realism maintain that the balance of power is based on the tangible military assets subject to and possessed by states such as nuclear weapons. Neo-realism is divided into defensive realism and offensive realism. The study is based on offensive realism, which assumes that states are constantly trying to gain as much power as possible, which leads to the security dilemma, that states are in constant competition to maximize their power compared to their counterparts².

A central concept in neorealism is “self-help”, this concept is linked to “anarchy”, and it means that states rely on themselves and their own capabilities rather than relying on other actors to maintain and ensure their survival³. The structure realism

also confirmed the importance of “latent power” concept. It considers that states have a kind of power called “latent power”. This power includes social and economic ingredients that contributes strongly in building military power. The latent power is based mainly on state’s wealth and the size of its population in addition to resources and raw potential state can draw on to upset its rivals^{4 5}.

Methodology

The Methodology of the study depends on the interpretive approach which is applied here to explain the phenomenon of “neo-nuclear proliferation” and gain deeper understanding of it in its natural context, through testing the neo-realism theory. In addition to “A case study approach” that provides In-depth analysis of the neo-nuclear proliferation by United States, China and Russia. Data includes scientific journal articles, books, documents, news on nuclear proliferation, and other online resources.

Study sections

The study includes three sections; the first presents the current anarchic international system key features, while the second section deals with the great powers nuclear doctrine change, and the third section discusses the neo-nuclear proliferation main features.

i. The current anarchic international system key features

The current international system has become full of violent conflicts and wars, in conjunction with the absence of powerful and effective international mechanisms to curb such anarchy the world suffers. In other words, conflicts around the globe have raised the uncertainty levels at both regional and international levels. In general, in the midst of the conflicts and geopolitical deteriorations in addition to the impossibility of verifying the intentions of each state, countries decide to strengthen and foster their defense budget, military power and therefore nuclear deterrence.

Accordingly, Stockholm International Peace Research Institute, in its assessment of the state of armaments, disarmament and international security Yearbook 2024 launched in July 2024, confirmed that in January 2024, there were 9585 warheads in military stockpiles for potential use out of 12121 nuclear warheads. An estimated 3904 of those warheads were deployed with missiles and aircraft compared to 3844 in January 2023⁶.

As a result of the expansion of the manifestations of international anarchy and the multiplicity of its causes and motivations, the study is concerned, in this section, with the anarchy has been caused by the great powers from 2022, as the realism and

neo-realism theories consider that the great powers are the key actors in international system.

On the one hand, Since Russian full-scale invasion of Ukraine, the conflict between Russia and the west has escalated, causing a wide range of repercussions for both great and small powers. In this regard, Michel Duclos, a Special Advisor and Senior Fellow in Geopolitics and Diplomacy, indicated in march 2022 that after the invasion of Ukraine we become in a “new world”, signaling a return to the 20th century aggressions⁷.

Among the other violent conflicts, The Israel war in Gaza since October 7th "2023 and the resulting regional security threats have pushed states to rely more on “self-help” and “latent power”, as there is no global power has the ability to stop this war or even narrow its scale, which reflect a new era of security dilemma and real threats to all international politics aspects^{8 9}.

On the other hand, although there were several treaties aimed to curb nuclear proliferation, beginning with the launch of “Atoms for Peace” program in 1953 by U.S. President Dwight D. Eisenhower, the nuclear arms reduction Mechanisms, including treaty on the non-proliferation of nuclear weapons (NPT), are struggling today amid great power competition, and the diplomacy efforts have become ineffective¹⁰.

In response to increase in the intensity of conflict between Russia and the west over Ukraine, Moscow announced in February 2023 that it will suspend its participation in the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START). Although this treaty will expire on 2026, it is also the last remaining treaty limiting nuclear arms, especially those subject to Russia and U.S.^{11 12}.

As a countermeasure, the United States has also suspended its sharing or announcing “New START” data. In addition, Moscow withdrew its ratification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) in November 2023, as well, Russia has repeatedly threatened at a wide range that it intends to use nuclear weapons due to the support from west for Ukraine. And besides that, the talks between Washington and Moscow have shrunk at the political level over nuclear arms reduction, in conjunction with the abolition of several bilateral arms control treaties, including Anti-ballistic missiles treaty and others¹³.

Not only that, though U.S. President Joe Biden and Chinese President Xi Jinping discussed nuclear issues in November 2021, During the first virtual summit between the two leaders, and agreed to move forward discussions on strategic stability, the two countries have not made any progress regarding nuclear arms control yet, instead, U.S.

and China have deeply strengthened their nuclear arsenals amid the strategic escalation between them¹⁴.

In the context of what we mentioned above, many specialists and experts mentioned that the role of nuclear weapons has become more prominent and crucial in the international relations.

There is another dimension of the anarchy that causes armament race, this is technology owned by states. What the study discusses in this regard explain the relation between the “anarchic system” and “self-help”. Advanced technology has become a powerful driver for the development of nuclear weapons by the great powers, which monopolize these technologies.

Although previous literature, such as “Richard Burt's” study "Nuclear Proliferation and the Spread of New Conventional Weapons Technology" has argued that nonproliferation strategies must include mechanisms to prevent the transfer of technology and expertise to non-nuclear states that might use them to produce these weapons¹⁵, and many studies have discussed strategies to prevent the production of nuclear weapons by non-nuclear states, the reality of current nuclear proliferation is that it is part of a larger arms race among great powers.

The major states are racing and making strong progress in developing unprecedented qualitative nuclear capabilities, this is supported by the nuclear-industrial complex in those states, which turns a blind eye to the ethical dimension of using artificial intelligence and smart technology in developing weapons. This complex is increasingly active in geopolitical conflicts, such as those currently witnessed by the international community, and is based on devoting the economic and technological capabilities of the state in order to test new types of weapons in those conflicts¹⁶.

This indicates that the use of military technology by major powers is subject to international anarchy, which means that nuclear proliferation increases as the technological and material capabilities of countries increase and threatens strategic stability. For example, a study by "Stephen Reny” found that when nuclear-armed states use technology to gain a competitive advantage over their adversaries, this threatens the nuclear deterrence environment and strategic stability, which is the belief that a target adversary has the capability and will to launch a punitive counterstrike.¹⁷

Hence, the latent power of possessing technological capabilities has become a source of arms race between the great powers, as a result of the difficulty of controlling it due to the crucial interests it represents for those countries, which boost anarchy in this regard and incites states to rely on “self-help”.

ii. The great power nuclear doctrine change (Why do states want nuclear power)

This era of geopolitical deteriorations witnesses a new nuclear arms race, new nuclear proliferation aims. This could be implied in the question posed by neorealism “Why do states want power?”, as the major powers conduct continuous revisions in their nuclear doctrine due to the Changing Strategic Environment and in the context of “security dilemma”, which refers that the steps taken by great powers to enhance their own security reduce the security of other states, making it difficult for a state to improve its chances of survival without threatening the survival of other states¹⁸.

This section reviews the changing nuclear doctrine and the new determinants of the nuclear proliferation among the major most prominent powers in the current nuclear landscape: The United States, Russia, and China, based on the realist focus on major powers as mentioned above.

1- The United States

The United States faces an emergence of two peer nuclear adversaries, unlike the cold war and for the first time, as China and Russia will most likely possess more nuclear weapons and innovative types of them than the United States. Despite Russia’s significant quantitative superiority over China, the ٢٠٢٢ U.S. national defense strategy, which includes the Nuclear Posture Review, identified China as (pacing challenge), and among several dimensions urge Washington to describe China as a pacing challenge, the nuclear dimension has become a main pillar for U.S., despite being ignored over the past decades, as for a long time, Washington did not pay attention to “nuclear China”^{19 20}.

For example, in its 2023 annual report “Military and Security Developments Involving the People’s Republic of China”, the U.S. Department of Defense mentioned that China is expected to be in possession of more than 1000 operational nuclear weapons by 2030 and 1500 by 2035, which poses a massive threat²¹. This is Refuting the allegations of experts at the Federation of American Scientists that maintain that if China ends up with possessing more inter-continental ballistic missiles (ICBMs) than the United States and grows its nuclear arsenal by 2035 to about 1500 warheads, that will not render China equal to the United States in terms of military power²².

As well, the Secret Nuclear Strategy approved in March 2024 focuses for the first time on China’s rapid expansion in its nuclear arsenal²³. Sources familiar with this secret document confirm that the nuclear landscape will be more complex and volatile, and The United States must be able to confront more than one nuclear adversary, and be prepared to respond to simultaneous nuclear attacks. Accordingly, Washington is

working to expand its response and deterrence capabilities with a combination of nuclear and non-nuclear weapons²⁴.

According to what mentioned above, The United States has become more focused in its declared and secret nuclear doctrine on the qualitative dimension of the threat. Despite Russian aggression and its escalating threat to use nuclear weapons, Washington indicates in its national and defense strategies, as well as statements by its officials, that Beijing has become the primary threat to the United States in the field of defense in general due to its accelerating and unprecedented qualitative capabilities in building up defense and nuclear capabilities.²⁵

While the US Nuclear Posture Review in early 2022 focuses on arms control and non-proliferation, and Washington's commitment to that, the escalation of tensions between nuclear-armed states as a result of the security dilemma makes disarmament and non-proliferation efforts more challenging²⁶. Therefore, Washington emphasizes the importance of strategic deterrence, not just nuclear deterrence, referring to the increase in nuclear adversaries and the expansion of their capabilities²⁷.

2- Russia

Russian leadership announced in September 2024 (a new nuclear doctrine) which includes new insights into changes to Russia's nuclear doctrine. This doctrine implies that "the nuclear mission is being expanded"²⁸.

The Russian nuclear principle of 2020 on nuclear deterrence identified four conditions for Moscow to use weapons of mass destruction or nuclear weapons to ensure its sovereignty. These conditions included: receiving data about an incoming ballistic missile attack, use of nuclear or mass destruction weapons against Russia and its allies, attacks on Russian nuclear command, control, and communications infrastructure, and attacks with conventional weapons that sharply threatened the Russian state. The 2020 nuclear principle also indicated Russia would count on nuclear weapons to prevent escalation of military actions²⁹.

Russia has applied this principle since its wide invasion of Ukraine in 2022. It carried out military drills involving tactical nuclear weapons with Belarus, and in an unprecedented move, announced these drills to the Russian public, which means that Russia seeks to normalize its nuclear discourse³⁰.

Most analyses interpret Russia's new nuclear doctrine within the context of the Russia-Ukraine war and the broader conflict between Moscow and the West, as Russia's threat to use tactical nuclear weapons has increased, and Russian officials' discourse has emphasized the country's intention to use nuclear weapons against any

critical threat to the state sovereignty, indicating Russian escalation and reflecting its willingness to use nuclear weapons if the state assesses any threat to it as “critical” from its point of view.

In general, the Russian nuclear doctrine expands the possibilities of using nuclear weapons, to the point that Moscow considers that any country that supports conventional attacks on Russia, even if it does not participate in carrying them out, will provoke Russia to use nuclear weapons against it³¹.

Although Russia is unlikely to use nuclear weapons in Ukraine, its discourse emphasizes the importance of nuclear deterrence more than strategic deterrence in its broader sense, as Russia’s conventional weapons have not decided the war in Ukraine in Moscow’s favor. In addition, from an offensive realist perspective, Russia is increasing uncertainty in the current international system by emphasizing the secrecy of the details of its new nuclear doctrine, which could force other major powers to significantly increase their nuclear capabilities in the coming period.

It can also be argued that the Russian nuclear force will benefit from military-technical support from China and North Korea, as data has shown that the tripartite support from Beijing, Tehran and Pyongyang, and military partnerships among them, have enabled Moscow to withstand its war against Kiev, despite the pressures resulting from Western sanctions, until the date of writing this study³².

These countries, especially China and North Korea, have shown significant progress in terms of nuclear capabilities, for example, in 2023 North Korea conducted its first test of a short-range ballistic missile from a rudimentary silo. It also completed the development of two types of land-attack cruise missile designed to deliver nuclear weapons. North Korea also pay attention to develop a tactical nuclear weapons arsenal, which raises concerns that Pyongyang intends to utilize these weapons at the dawn of conflicts³³.

3- China

In 2021, new evidence surfaced and confirmed that China is involved in a significant build-up of its nuclear arsenal and achieving a rapid progress in this field. According to Stockholm International Peace Research Institute estimate of World nuclear forces (Jan 2024) China nuclear stockpile jumped from 410 warheads in January 2023 to 500 warheads in the same month of 2024³⁴. In addition to this increase, there are clues that China is changing its nuclear doctrine and deterrence determinants.

After Beijing launched and tested its first nuclear device in 1964, the first-generation leaders in China emphasized the important role of Chinese nuclear weapons

in deterring potential nuclear attacks³⁵. But the Chinese nuclear policy for this period and after stated that China pursued a “self-defensive nuclear” strategy, the two key pillars of that strategy were: counter attack in self-defense and nuclear weapons limited development³⁶.

Accordingly, in the decades followed 1964, China maintained a modest nuclear evolution and credible strategy to achieve nuclear stability with the two main powers, Soviet Union and the United States. This Nuclear stability refers to both arms race stability³⁷.

But through the last few years, China has been strengthening its nuclear base faster and faster, Beijing efforts in this regard include qualitative leap and new nuclear posture such as “launch under attack”. it has also begun loading nuclear missiles into new silo fields that were spotted by satellites, in addition its declared goals to build a powerful strategic deterrent capability system^{38 39}.

In addition, For the first time, China may be deploying a small number of warheads on missiles during peace time, and in the light of its manner and strategy to structure its forces, Beijing could have a number of intercontinental ballistic missiles like or more than Moscow and Washington by the turn of the running decade⁴⁰.

The new Chinese nuclear arsenal evolution is characterized by its rapid growth in unprecedented manner⁴¹. At present, China is thought to be possessing one of the fastest growing nuclear arsenals in the world⁴². China ongoing growing nuclear capabilities in size, speed, scope, and evolution negate the state commitment to “no first use” principle and “defensive national defense policy” reflected by 2015 China’s Military Strategy. This military strategy stipulates “adherence to the stance that “We will not attack unless we are attacked, but we will surely counterattack if attacked” as well “maintain strategic deterrence and carry out nuclear counterattack”⁴³.

Within the framework of what we have mentioned, a number of new determinants of the Chinese nuclear doctrine can be identified. First: China seeks to prove itself as a great power that should not be underestimated. The rapid Chinese nuclear development has not proven that Beijing has abandoned the principle of "deterrence for self-defense," as most literature assumes. In light of the economic, technological, political and developmental gains achieved by that country, it is illogical for Beijing to seek a first nuclear strike that threatens its state and its well-being.

Second: The "speed challenge" imposed by Beijing among the major nuclear powers aims for China to become a nuclear power countering the United States alongside Russia and poses unprecedented threats to Washington through making the nuclear posture more complex.

Third: Some literature indicates that China aims to develop its nuclear arsenal to balance the American nuclear force, but the study refutes these claims; Washington has been developing its nuclear arsenal over the past decades without corresponding efforts from China, as well, China's nuclear development indicators, which indicate that it increased the size of its nuclear arsenal between 2023 and 2024, can confirm that Beijing's motive was not "fear of American nuclear power," as the Russian-Ukrainian war demonstrated the weakness of the United States and the West as a whole in dissuading Russia from invading Kiev, and Washington's unwillingness to wage conventional or nuclear wars. On the contrary, Russia's success in continuing the war and invading Ukraine encouraged China to develop its nuclear power.

Fourth: It can be said that the Beijing administration is trying, and has succeeded, in attracting the United States to focus on China in its discourse and strategies to a greater extent than Russia for the first time, which strengthens Russia's position in its war against Ukraine and its conflict with the West and increases the weakness of Washington and the European Union countries, especially in the midst of the political and economic problems that the United States is suffering from. Russian steadfastness in this geopolitical conflict leads to distracting the United States, on the other hand, from besieging China in the Indo-Pacific region.

iii. The neo-nuclear proliferation main features

In light of what mentioned above, the current nuclear posture reinforces the concept of strategic deterrence, but in the absence of the nuclear stagnation that prevailed in the past years, which creates a state of uncertainty and compel states to strengthen their nuclear arsenals within the context of self-help.

The absence of the concept of strategic stability in the current nuclear scene is also noticeable, which can be explained within the framework of the security dilemma concept, as each country seeks to maximize its nuclear capabilities as a result of the great technological development supported by the nuclear-industrial complexes in those countries, which enhances skepticism about the intentions of countries and thus creates an arms race.

It can be said that the current international nuclear situation has made amendments to the concept of "self-help" proposed by the neo-realism theory, so instead of the country relying on itself and its economic, material and technological capabilities to ensure its survival by strengthening its military power instead of relying on other countries, self-help has also come to include parties with the same strategic goals, as The nuclear landscape includes two major powers, China and Russia, versus another power, the United States. Moscow and Beijing are also linked by a strong military

partnership. Not only that, but these two powers are supported by nuclear Iran and North Korea. These countries depend on each other to exchange military technical expertise, as well as military supplies. This can lead to nuclear proliferation increase among these allied states at a faster rate than ever before.

At the same regard, the concept of “latent power” has become dependent on technological innovation. In addition to economic and social capabilities, as the neo-realism assumes, accelerating technological power is the main determinant of the current and future era of nuclear proliferation. Given that China has become a world leader and a very fast-paced one in the field of artificial intelligence and technological innovation in the military sector, and in light of its military partnership with Russia, it is not unlikely that the balance of nuclear power will tip in favor of the East in the future.

Despite the prevalence of lack of transparency and reliable data in the past years regarding nuclear weapons, the current nuclear proliferation is witnessing a “kind of frankness” and even scrambling by the great powers, in the midst of geopolitical deteriorations. This can be explained as a result of the security dilemma that has become more acute in that period, and has led to the absence of the relative strategic stability as previously mentioned.

Over and above, there are growing concerns regarding non-state actors acquiring, then using, nuclear weapons. The possibilities of this scenario are driven by some facts and new datums in international politics **as following:**

First: the recently use of highly advanced weapons by non-state actors

The past few years has witnessed noticeable improvement in the quality of weapons owned by non-state actors. This has become more clear after Israel-Hamas war that began in October 2023 and has sparked regional conflagration that paved the way for Houthi group to implement its agenda in the region.

This group used highly developed weapons it had never before controlled, such as cruise and ballistic missiles to threaten shipping in the Red Sea with the support of Iran. The Houthis launched repeated drone and missile strikes on ships to show their support for the Gaza strip in solidarity with Palestinians⁴⁴, as a result the Houthis have disrupted shipping traffic in the Red Sea, which led the World Bank to describe this crisis as “unprecedented” due to its economic and political repercussions⁴⁵.

The fact that such non-state armed group possesses that advanced military capability marks a new era in the proliferation of the advanced missile and military

technology, as well as access to weapons that were previously only available to countries with advanced financial and technological capabilities⁴⁶.

Second: Informal alliances between nuclear powers and armed groups to transfer weapons

The prevention of a potential nuclear force appearance needs to disrupt and obstruct any channels for the transfer of nuclear technologies, but the international arena is very far from that. The U.S and other great powers failed to achieve this after the cold war, and this has been evident in the case of Iran which become one of the biggest challenges to non-proliferation policies⁴⁷.

For a long time, Moscow has provided significant support to Tehran in its nuclear program under the umbrella of their strategic alliance and growing cooperation which boost the two countries interests in the middle east. This alliance has been facilitating transfers and spillover of critical military and nuclear technology, Although the international community endeavors, both in diplomatic level and economic pressure, to curb the evolution of that program.

After the Russian invasion of Ukraine, the factors supporting that alliance have increased significantly. On the one hand, Moscow is now working to weaken the West countries led by Washington to diminish their support to Ukraine by dispersing their efforts and destabilizing crucial areas like the middle east. On the other hand, Tehran has become a reliable supplier for advanced weapons to Russia within a framework of a deep defense partnership between the two countries, in a move could significantly support Moscow in its war with Ukraine.

In this context, The West accuses Iran of supplying Russia with lethal drones and close-range ballistic missiles that are playing a very important role in supporting the Russian war against Ukraine. Furthermore, the matter is not limited to the relationship between Moscow and Tehran but rather military cooperation has increased beyond that, and extended to non-state actors.

In September 2024, news was published about Iran mediating secret talks between Russia and Houthi rebels to transfer anti-ship missiles to the militant group in order to strike commercial vessels in the Red Sea and disturb the west economy and threaten the American and European warships⁴⁸. In addition, Russia has supplied the "Yakhont" missile to Iran-backed Hezbollah in November 2023 for ensuring its threat to U.S. navy⁴⁹.

At the same context, a Brookings Institution analytic article published in February 2024, referred that it is expected to see more North Korean weapons, which is one of the official nine nuclear forces, reach non-state armed actors⁵⁰

Although the reach of such weapons to non-state actors is not entirely new, the growing political tensions between Russia and the west, Russia's prolonged war in Ukraine, and the expanding of conflict through the middle east could facilitate and encourage further transfer of dangerous weapons, including nuclear and weapons of mass destruction to non-state armed groups, especially in the light of Russia threaten to use tactical nuclear weapons and its official declaration of non-compliance with any international treaty or law prohibiting the use of nuclear weapons.

In addition to what mentioned above, the international community is now suffering from weakness to provide solutions to a number of contemporary challenges, as a result of the complexity of the concept of security at more than one level. This means that the international community has become beyond far from imposing deterrent or legal cover to prevent the development, transfer, and use of advanced weapons, including nuclear weapons, to non-state armed group, especially in light of the great technological development and the possibility of developing nuclear weapons that are easier to spread.

Nuclear proliferation by non-state armed groups will be more difficult to control than by states, as these groups have nothing to lose, unlike major countries that have achieved great progress in all areas, economically, politically and technologically, and it is difficult to dispense with all of that as countries are rational.

Conclusion

Through the axes of the study presented above, it became clear that there is more than one dimension to answer the main question of the study. The first is what related to the anarchic system which lead states, especially main powers, to maximize their military power and expand their nuclear arsenals; this anarchy itself is very complex, because it is linked to the absence of diplomatic dialogue to prevent nuclear proliferation on the one hand, and the spread of conflicts and wars without deterrence on the other hand, in addition to the technological dimension not subject to international control, which in turn supports the development of more deadly nuclear weapons that are easier to transfer and use by major and minor powers as well.

Even with the return of diplomatic dialogue between countries to limit the spread of nuclear weapons, the nuclear-industrial complex within those countries remains the most influential because it constitutes powerful political and economic lobby in those countries. This deepens the manifestations of international anarchy, which in turn leads, as the world is now witnessing, to increased nuclear proliferation.

The second dimension is reflected in the great power nuclear doctrine change, which has contributed in the nuclear proliferation increase in a new manner. As mentioned in the second axis of the study; the main powers conduct continuous revisions in their nuclear doctrine due to the Changing Strategic Environment and geopolitical deterioration, the current revisions include new aims amid a new nuclear arms race. For the United States, it goes without saying that this major power is now countering two nuclear powers unlike the cold war -which is one of the main features of present nuclear proliferation- this pushed Washington to emphasize the importance of strategic deterrence due to the increase in nuclear adversaries. As well, the U.S. 2024 Secret Nuclear Strategy focused for the first time on China, Accordingly, United States has become more focused in its nuclear doctrine on the qualitative dimensions, this could refer to the rising of nuclear threats in the Indo-pacific region, which is the largest hotbed of Strategic competition between Washington and Beijing.

At the same context, Russia declared in 2024 (a new nuclear doctrine), that support nuclear proliferation and in a new manner. This doctrine states that the nuclear mission is being expanded. In addition, and for the first time, the Russian present nuclear doctrine expands the possibilities of using those weapons to the extent that Moscow will use nuclear weapons against any critical threat to the state sovereignty from its view point. The Russian updated nuclear doctrine greatly catalyzes nuclear proliferation increase, as it ensures the nuclear deterrence alongside with extreme secrecy that increases uncertainty and pushes states to boost their nuclear arsenals.

Therefore, China also has become a main contributor to the neo-nuclear proliferation. It is now a nuclear power that countering the United States alongside Russia and poses unprecedented threats to Washington through making the nuclear posture more complex, as through the last few years, Beijing has been strengthening its nuclear base to promote its nuclear posture in the light of its growing technological capabilities, that have become the key driver of nuclear weapons development.

The third dimension revolves around the new features of current nuclear proliferation. The neo-nuclear posture reinforces the concept of strategic deterrence in the absence of the nuclear stagnation. It also relies more on “self-help” among states that share the same interest and strategic aims, which foster increased proliferation, and supports an expanded concept of “latent power” that relies on unique technological capabilities at that era, which leads to strategic instability and competition among the great powers to acquire more nuclear arsenals in the midst of geopolitical deteriorations.

There is also a growing possibility of new actors, supported by major powers, entering the nuclear proliferation landscape for the first time. This is attributed to the recently use of highly advanced weapons by non-state actor, in addition to the informal alliances between nuclear powers and armed groups to transfer weapons. That would make the nuclear posture more dangerous and widespread.

Finally, military power is making a strong comeback in the political landscape amid geopolitical conflicts in almost every region of the world, and nuclear proliferation has spiraled out of control as a result of international anarchy. Although states are unlikely to risk using destructive nuclear weapons, the accelerating nuclear arms race driven by unprecedented technological capabilities will increase global instability and push states to rely more heavily on military power to ensure their survival, as a result of the security dilemma.

¹ Mearsheimer, J. J., "Structural Realism", Dunne, T., Kurki, M., Smith, S., (eds.). (2023). International Relations Theories. Discipline and Diversity, Oxford, Oxford University Press, pp 77-90.

² Ibid.

³ Saini, K. K. (2015). A Comparative Analysis of Realism and Neo-Realism. AIJRA, III (I A), 94.3 - 94.4.

⁴ Smith Stegen, K. (2023). International relations theory on grid communities and international politics in a green world. Nature Energy, 8(10), 1073-1077.

⁵ Ripsman, N. M., Talianferro, J. W., & Lobell, S. E. (2016). Neoclassical realist theory of international politics. Oxford University Press. Retrieved From: <https://doi.org/10.1093/acprof:oso/9780199899234.001.0001>

⁶ Sipri. (2024). Role of nuclear weapons grows as geopolitical relations deteriorate. Retrieved From: <https://shorturl.at/eOz2i>

⁷ Michel Duclos, M. (2024). The Ukraine War: Russia's Duel with The West. Retrieved From: <https://www.institutmontaigne.org/en/expressions/ukraine-war-russias-duel-west>

⁸ Hassan, N. A., Mustafa, S. (2024). The Impact of Contemporary International Wars on International Security- A Case Russia's War on Ukraine and Israel's War on Gaza. International Journal of Religion, 5(11), 390.

⁹ Shay, S., (2023). The War in Gaza from Local to Regional. International Institute for Counter-Terrorism. Reichman University. p 3.

¹⁰ Munro, A. (2024). nuclear proliferation. Retrieved From: <https://www.britannica.com/topic/nuclear-proliferation>

¹¹ Sipri. **Op.cit.**

¹² Dibb, P. (2024). A new US, Russia, China nuclear arms race spells danger. Retrieved From: <https://www.aspistrategist.org.au/a-new-us-russia-china-nuclear-arms-race-spells-danger/>

¹³ Ibid.

¹⁴ Zhao, T. (2024). Political Drivers of China's Changing Nuclear Policy: Implications for US-China Nuclear Relations and International Security, 1-2.

¹⁵ Burt, R. (1977). Nuclear proliferation and the spread of new conventional weapons technology. International Security, 119.

¹⁶ Liaquat, A. The Nuclear Industrial Complex at Work. Stratheia Policy Journal. Retrieved from: <https://shorturl.at/ytWdN>

¹⁷ Reny, S. (2020). Nuclear-armed hypersonic weapons and nuclear deterrence. Strategic Studies Quarterly, 14(4), 49-50.

¹⁸ John J. Mearsheimer, Op.cit.

¹⁹ U.S. Department of defense (2022). National Defense Strategy. p 1.

²⁰ Santoro, D. (2023). Getting Past No: Developing a Nuclear Arms Control Relationship with China. Journal for Peace and Nuclear Disarmament, 6(1), 68-69.

²¹ U.S. Department of Defense (2023). Military and Security Developments Involving the People's Republic of China. p 104.

- ²² Jash, A. (2024). By the numbers: China's nuclear inventory continues to grow. Retrieved From: <https://www.lowyinstitute.org/the-interpreter/numbers-china-s-nuclear-inventory-continues-grow>
- ²³ Sanger, D. E. (2024). Biden Approved Secret Nuclear Strategy Refocusing on Chinese Threat. Retrieved From: <https://www.nytimes.com/2024/08/20/us/politics/biden-nuclear-china-russia.html>
- ²⁴ Ibid.
- ²⁵ Kristensen, H., Korda, M. (2022). The 2022 Nuclear Posture Review: Arms Control Subdued by Military Rivalry. Retrieved From: <https://fas.org/publication/2022-nuclear-posture-review/>
- ²⁶ Eyina, N. N., Anyalebechi, S. M. (2024). Deterrence, Security Dilemma and the Proliferation of nuclear weapons in the international system: A Study of North Korea and Pakistan. *European Journal of Humanities and Educational Advancements*, 5(05), 97-98.
- ²⁷ Cronk, T. M. (2017). Strategic Deterrence More Than Nuclear, Stratcom Commander Says. Retrieved from: <https://shorturl.at/z8OtJ>
- ²⁸ Mao, F. (2024). Putin proposes new rules for using nuclear weapons. Retrieved From: <https://www.bbc.com/news/articles/c5yjej0rvw0o>
- ²⁹ Williams, H. (2024). Why Russia Is Changing Its Nuclear Doctrine Now. Retrieved from: <https://www.csis.org/analysis/why-russia-changing-its-nuclear-doctrine-now>
- ³⁰ Ibid.
- ³¹ Mao, F., Op.cit.
- ³² Bergmann, M., Snegovaya, M., Dolbaia, T., (2024). Collaboration for a Price: Russian Military-Technical Cooperation with China, Iran, and North Korea. CSIS Report, 1.
- ³³ Sipri. Op.cit.
- ³⁴ Ibid.
- ³⁵ Zhao, T., Op.cit. p. 2.
- ³⁶ Cunningham, F. S., Fravel, M. T. (2015). Assuring Assured Retaliation: China's Nuclear Posture and U.S.-China Strategic Stability. *International Security*, 40 (2), 7-8.
- ³⁷ Zhao, T., Op.cit. pp1- 2.
- ³⁸ David E. Sanger. Op.cit.
- ³⁹ Ibid.
- ⁴⁰ Sipri. Op.cit.
- ⁴¹ Twomey, C. P., (2021). Assessing Chinese Nuclear Posture and Doctrine in 2021. Atlantic Council. Scowcroft center for Strategy and Security, p. 1.
- ⁴² Jash, A. (2024). By the numbers: China's nuclear inventory continues to grow. Retrieved From: <https://www.lowyinstitute.org/the-interpreter/numbers-china-s-nuclear-inventory-continues-grow>
- ⁴³ Ministry of National Defense of the People's Republic of China (2015). China's Military Strategy. Retrieved From: <http://eng.mod.gov.cn/xb/Publications/WhitePapers/4887928.html>
- ⁴⁴ Irish, J., Hafezi, P., Landay, J., (2024). Iran brokering talks to send advanced Russian missiles to Yemen's Houthis Retrieved From: <https://shorturl.at/Vg5Ey>
- ⁴⁵ Bogetic, Z., Zhao, L., Le Borgne, E. (2024). Navigating troubled waters: The Red Sea shipping crisis and its global repercussions. Retrieved From: <https://blogs.worldbank.org/en/developmenttalk/navigating-troubled-waters--the-red-sea-shipping-crisis-and-its->
- ⁴⁶ Brady, J. (2024). Houthi attacks from Yemen show need for controls on advanced missile technology proliferation. Retrieved From: <https://shorturl.at/MMVYU>
- ⁴⁷ Mizin, V. (2004). The Russia-Iran nuclear connection and US policy options. *Middle East Review of International Affairs*, 8(1), 71.
- ⁴⁸ Irish, J., Hafezi, P., Landay, J. Op.cit.
- ⁴⁹ Laila Bassam, L., Perry, T. Hezbollah's anti-ship missiles bolster its threat to US navy. Retrieved From: <https://shorturl.at/iTYAx>
- ⁵⁰ Yeo, A. (2024). Expect to see more North Korean weapons reach nonstate armed actors in 2024. Retrieved From: <https://shorturl.at/ruhEe>