

**CHARLES UNIVERSITY**  
**FACULTY OF SOCIAL SCIENCES**  
Institute of Political Studies

**Master thesis**

**2020**

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**Years of Dreaming Big: Chinese Nuclear Rise  
and Great Power Strategic Stability**

*Master thesis*

Prague 2020

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**Academic Year:** 2019/2020

## **Bibliographic note**

Nikolić, Luka. *Years of Dreaming Big: Chinese Nuclear Rise and Great Power Strategic Stability*. 112 p. Master thesis. Prague: Charles University, Faculty of Social Sciences, Institute of Political Studies, 2020.

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Prague 18.05.2020

**Luka Nikolić**

A handwritten signature in black ink, appearing to read 'Luka N.' with a stylized flourish at the end.

## Abstract

Great powers have almost exclusively decided the destiny of international relations. The birth, life, and death of an order have been regulated by those actors with the largest military, strategic, economic, and other capabilities. Conceptually building upon the premises of structural realism, the thesis claims that the Chinese nuclear rise is the decisive factor for the disappearance of the incumbent international system and the consequent rise of the new one, labeled as asymmetric triangular nuclear competition. This critically affects the notion of strategic stability, adjusting its characteristics for a different strategic environment. The research has twofold relevance. First, in the academic sense, it deepens a scantily treated debate on the interconnection between the management of nuclear weapons arsenal and the overall outlook of the international system. Second, in the practical sense, the study of the behavior of great powers provides an excellent foundation for policy analysis.

The aforementioned is achieved in the three stages. In the beginning, the Chinese nuclear rise is considered as a set of comprehensive reforms in terms of weapons systems, military apparatus, but also doctrines and strategic concepts. After that, the nuclear rise is put in the context of Chinese silent moves from defensive to offensive nuclear strategy in order to demonstrate its revisionist character. This is the main indicator of transition to a different great power interaction marked by the asymmetry of strategic domains, triangular systemic formations, and nuclear competition as a conceptual substitution for the outdated arms race. Finally, it is shown how the Chinese nuclear rise affects strategic stability by analyzing the six main characteristics and changes imposed on them. The hypothesized relationship is negative in nature: the higher level of Chinese nuclear rise, the lower level of preservation of the current strategic stability outlook.

**Keywords:** China; nuclear weapons; military modernization; strategic stability; great powers

**Range of thesis:** 225 th. Symbols

## Acknowledgements

I would like to thank my supervisor, Jan Ludvik, for the patient guidance throughout the whole research process. Although my ideas were at times unrestrained and rebellious, Professor Ludvik shaped them and directed me towards a coherent final product. I have been extremely fortunate to have such a dedicated supervisor whose due diligence and enthusiasm proved to be critical for my work.

I would like to acknowledge Professor Nik Hynek for sparking my research interest in the strategic studies and beyond. Subjects taught jointly by Professors Hynek and Ludvik significantly widened my academic horizons, provoked many rhizomatic discussions of high quality, eventually resulting in this research piece.

With my colleague, friend, and intellectual (older) brother, Igor Milić, I almost institutionalized the practice of reading and harshly criticizing each other's work. He has been a committed reader and corrective factor from the stage of an idea fitting into a short message all the way to the long and exhausting chapters of the thesis. In psychoanalytic terms, Igor has been my Big Other.

Finally, I would like to thank my family for the priceless support. Without their permanent intellectual, spiritual, and financial efforts I would never have the chance to achieve these academic accomplishments. I owe them a sincere apology for not being a proper son and grandson during the long periods of obsessive devotion to this project. Their care, understanding and unlimited patience reassured me that behind every mature, successful person stands an extraordinary family.

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## List of Abbreviations

| <b>Abbreviations</b> | <b>Full Description</b>   |
|----------------------|---|
| A2/AD                | Anti Access/Area Denial   |
| AFU                  | Ambiguous First Use (nuclear policy)  |
| ALBM                 | Air-Launched Ballistic Missile  |
| ASAT                 | Anti-Satellite Weapons  |
| ASBM                 | Anti-Ship Ballistic Missile   |
| ASCM                 | Anti-Ship Cruise Missile  |
| BMD                  | Ballistic Missile Defense   |
| C2                   | Command and Control   |
| C3                   | Command, Control and Communications   |
| C4I2SR               | Command, Control, Communications, Computers, Intelligence, Information, Surveillance and Reconnaissance |
| C4ISR                | Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance              |
| CCP                  | Chinese Communist Party   |
| CEP                  | Circular Error Probable (ballistics)  |
| CJ                   | Chiang Jian (Chinese cruise missiles family)  |
| DARPA                | Defense Advanced Research Projects Agency   |
| DF                   | Dong Feng (Chinese ballistic missiles family)   |
| ELF                  | Extremely Low Frequency   |
| HGV                  | Hypersonic Glide Vehicle  |
| ICBM                 | Intercontinental Ballistic Missile  |
| IRBM                 | Intermediate-Range Ballistic Missile  |
| JL                   | Ju Lang (Chinese ballistic missile family)  |
| KKV                  | Kinetic Kill Vehicle  |
| LEO                  | Low Earth Orbit   |
| MAD                  | Mutually Assured Destruction (nuclear policy)   |
| MIRV                 | Multiple Independently Targetable Reentry Vehicle   |
| MRBM                 | Medium-Range Ballistic Missile  |
| NFU                  | No First Use (nuclear policy)   |
| NPT                  | Non-Proliferation Treaty  |
| PLA                  | People's Liberation Army  |
| PLAAF                | People's Liberation Army Air Force  |
| PLASSF               | People's Liberation Army Strategic Support Force  |
| PLAN                 | People's Liberation Army Navy   |
| PLARF                | People's Liberation Army Rocket Force   |
| PRC                  | People's Republic of China  |
| SAC                  | Second Artillery Corps (former)   |

|        |   |
|--------|---|
| SAM    | Surface-Air Missile                                   |
| SLBM   | Submarine-Launched Ballistic Missile                  |
| SRBM   | Short-Range Ballistic Missile                         |
| SSN    | Nuclear-Powered Attack Submarine                      |
| SSBN   | Nuclear-Powered, Ballistic Missile-Carrying Submarine |
| START  | Strategic Arms Reduction Treaty                       |
| TEL    | Transporter Erector Launcher (ballistic missiles)     |
| TERCOM | Terrain Contour Matching (ballistics)                 |
| UAV    | Unmanned Aerial Vehicle                               |

# 1. Introduction

Great powers have always been teasing the imagination of researchers. Regardless of them being old civilizations, empires, colonial powers, nuclear powers, or global policemen, they are the main drive of creation of structure we label, not without oversimplification, international system or order. Mutual frictions of those actors, patterns of conflict and cooperation, regularity dispersion of intra and extra systemic actions, have been significant challenges for gaining objective insights. Obviously, the first resort or strategy to tame this unpredictable world was rationality. In the dawn of international relations as a discipline Toynbee compared existence of great powers to the human life cycle, Knorr was asking how power structures remain in power for so long, while Modelski tried to sketch political history as a set of repetitive cycles, resembling *longue durée*, a seminal idea developed by Annales School of historiography<sup>1</sup>. Strive for rationality will follow international relations to the day in which this paper is being written. However, many disruptive events have occurred casting doubt on whether we can declare rationality as a viable approach in an essentially irrational world. Radical changes in the outlook of the system are prominent in challenging the underlying logic. Namely, despite the attempts, no one could timely predict the cuts caused by the development of gun, Westphalian Peace or end of the Cold war. Almost all of the expertise we have is retroactive in nature, while predictive models have been systemically ostracized to the margins of science<sup>2</sup>. Despite all of these *aporias*, the fact of changes occurring in international relations cannot be easily disputed.

The change is the main point of this thesis, albeit somewhat ambivalent and unusual. Namely, Schweller divided countries on the basis of their actions towards the incumbent system on the

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<sup>1</sup> Arnold J. Toynbee, *A Study of History* (New York, NY: Dell Publ., 1974) 131-133. Klaus Knorr, *Power and Wealth: The Political Economy of International Power* (London: Palgrave Macmillan, 1973) 54-57. George Modelski, *Long Cycles in World Politics* (London: Palgrave Macmillan, 1987). For the study of Annales School look at: Fernand Braudel, *A History of Civilizations* (New York, NY: Penguin Books, 1993).

<sup>2</sup> There is huge literature on revolution in military affairs, but for the correlation with the outlook of the system look at: Colin S. Gray, *Strategy for Chaos: Revolutions in Military Affairs and The Evidence of History* (London: Frank Cass, 2004). For the predictive models, Toffler couple gave unprecedented insights in connection between technology and international relations: Alwin and Heide Toffler, *The Third Wave* (New York, NY: Bantam Books, 1980). We should not neglect often abominated Karl Marx as an unequalled prophet in the realm of political economy.

status quo and revisionist states<sup>3</sup>. The former are those that are satisfied with the system or tend to change it internally, engaging in maximizing their share of benefits. On the other side, revisionists tend to overthrow the existing state and either create the brand new one or keep the old system adjusted for the different leadership. Chinese ubiquitous rise has become a hot topic since the end of the Cold war and it is prominently oscillating between the threat theory and peaceful rise of China or responsible stakeholder attitudes<sup>4</sup>. Traditionally, the Chinese rise has been scaled down to the internal economic and socio-political reforms, possibly including traces of military importance. Therefore, this study takes the often neglected, hard power, nuclear weapons modernization as the main driver of future great power strategic outlook. Together with nuclear weapons, Chinese advancements in doctrines and policies, as well as a comprehensive strengthening of the military, will be analyzed.

The other pillar of this research, reflecting the nature of the system is strategic stability. In order to resist the temptation to label the incumbent order in terms of polarity or power relations, I resort to providing insights on whether there is equilibrium within the system or not.

Appropriately, an overwhelmingly mathematical model of equilibrium has been adjusted for the treatise on nuclear weapons implications. In that sense, strategic stability plays a double role by reminding us of the rules governing the production, proliferation, use and control of nuclear weapons, but also opening up space for the appearance of new concepts. In this thesis strategic stability is tentatively defined as a set of complex relations among the state actors in possession of nuclear weapons, through which the possibility of the nuclear escalation is lowered to a virtually non-existent level. The six main characteristics of the strategic stability as will be presented in the theoretical chapter are: second-strike capability; mutual vulnerability; predictability; single-domain operability; arms race and crisis stability; systemic polarity. One of the main aims of the thesis will be to show how the Chinese nuclear rise affects those features of strategic stability.

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<sup>3</sup> Randall L. Schweller, "Bandwagoning for Profit: Bringing the Revisionist State Back In," *International Security* 19(1), 1994.

<sup>4</sup> China threat theory has long been official discourse in American establishment: Bill Gertz, *The China Threat: How the People's Republic Targets America* (Washington: Regnery Publishing, 2002). There is also great literature on the China as a responsible stakeholder: Barry Buzan, "China in International Society: Is 'Peaceful Rise' Possible?" *The Chinese Journal of International Politics* 3(1), 2010: 5–36.

The strategic environment in which this thesis operates is quite a complex one, although not without the possibility to capture the main tendencies. Mearsheimer calls it unbalanced multipolarity, Cocker calls it a system of regional hegemonies, Xie Tao describes it in a pertinent Chinese way as a necessity to learn how to live with the dragon<sup>5</sup>. Innumerable studies and interpretations cannot avoid agreeing to the point that the cohesion of the post-Cold war system is slowly disappearing, paving a way for alternatives to emerge. Niebuhr claimed that "one of the most pathetic aspects of human history is that every civilization expresses itself most pretentiously, compounds its partial and universal values most convincingly, and claims immortality for its finite existence at the very moment when the decay which leads to death has already begun"<sup>6</sup>. Here it is of crucial importance to consider whether China will be a factor of damage control in a declining system or a pragmatic great power guerilla ready to take, this time a meaningful great leap forward.

Therefore, the research question is: how does the Chinese nuclear rise affect strategic stability of great powers? The relevance of this question is twofold. First, in academic terms, it builds upon scantily treated debate on the interconnection between aggrandizement of nuclear arsenal and stability of the system<sup>7</sup>. As such, the research tends to move away from traditional confines of putting nuclear weapons solely in relation to systemic polarity. Here, instead of being a cause, the (disappearance of) polarity is one of the consequences of nuclear rise. Moreover, I seek to contribute to the conceptualization of strategic stability as a notion torn between theory and practice by defining some of its key features adjusted for both academic and real-world problem analysis. Not the least, contrary to the often taken approach in the academy, I want to demonstrate that the underlying logic of the Cold war in international relations remained intact, while its manifest appearances and *modus operandi* have taken a completely new look. Second, in practical terms, research on great powers never gets old because those actors have been creating the outlook of the international system and every other aspiring power wanted to join

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<sup>5</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York, NY: W.W. Northon and Co., 2001) 44. Christopher Cocker, *The Improbable War: China, the United States and the Logic of Great Power Conflict* (Oxford: Oxford University Press, 2015). Tao Xie and Benjamin I. Page, *Living with the Dragon: How the American Public Views the Rise of China* (New York, NY: Columbia University Press, 2010).

<sup>6</sup> Reinhold Niebuhr, *Beyond Tragedy: Essays on the Christian Interpretation of History* (New York, NY: Charles Scribner's Sons, 1937) 54.

<sup>7</sup> As it will be seen in the theoretical chapter, most of the studies originate from early Cold war, such as: Ciro E. Zoppo, "Nuclear Technology, Multipolarity, and International Stability," *World Politics* 18, 1966.

the elite club. Taking China in focus as the fastest growing country in every sense and reflection of its rise in the US and Russia guarantees that the research is significant for prospective policy analysis.

The hypothesis is: Chinese nuclear rise negatively affects the existing outlook of strategic stability of great powers, causing shifts in its core characteristics. This is expected to be achieved through a three-stage process. First, the Chinese nuclear rise is framed as a revisionist tendency with the final aim to overthrow the incumbent order. Second, the newly created order is labeled as that of emerging asymmetric triangular nuclear competition. Third, in a completely changed strategic environment, features of strategic stability of great powers are adjusted accordingly. The "third era of strategic stability" is marked by the principle of stability of instability where the inherently disruptive elements are taken as a platform for the new normalcy.

Obviously, the result of the thesis will be the established relation between Chinese nuclear rise and strategic stability of great powers. In other words, if we take Chinese nuclear rise as an independent and strategic stability of great powers as a dependent variable, the main task will be to elucidate the nature of the change on the dependent variable based on its main characteristics. The hypothesized relationship between the variables should be negative in nature: the higher level of Chinese nuclear rise, the lower level of preservation of the current strategic stability outlook.

Given the limitations of the form of this particular research, data collection will come exclusively through the review of relevant academic sources. Aside, from that, numerous policy papers, strategies, and other governmental documents can be utilized to shed light on critical perspectives relatively absent from the academic debate. In other words, because of the lack of primary sources, a wide range of secondary sources will be complimentary to assist with the task of elucidating the dynamics of great power relations. Most of the research will be a qualitative evaluation of the secondary sources, while a minor part involves quantitative assessments, mainly for the sake of meaningful comparisons of traits of particular countries.

Limitations of the research are threefold. First, in the theoretical sense, it is restricted to developing one particular possibility in the distinction between status quo and revisionism and oriented to prove its validity in a positive manner rather than comparing the possibility of the two to take place. Moreover, it treats a limited number of characteristics of strategic stability without

ambitions to fully define it. Finally, it is focused mainly on military and diplomatic relations while leaving aside or briefly mentioning all the other softer forms of interaction such as economic or cultural. Second, in a practical sense, research treats solely a triangular vision of great power strategic outlook constituted by the US, Russia, and China where regional powers or great power aspirants play a significantly less important role. The fact of the system being characterized as a non-polar provides further basis for this claim since bandwagoning and alliance making has been assigned a meaning differing from the traditional interpretations. Third, in terms of data collection, research is severely limited by the availability of the resources since a wide array of strategically crucial information is classified for the obvious reasons. The language of the researcher stands as well as a barrier when it comes to the academic work and documents published in Chinese and Russian languages.

This thesis is composed of four parts. First, the theoretical and conceptual framework is presented in order to put the thesis in a meaningful theoretical context and conduct an in-depth analysis of the strategic stability and revisionism. Second, the Chinese nuclear rise is considered as a set of comprehensive reforms in terms of weapons systems, military apparatus, but also inherent doctrines and strategic concepts. Moreover, the Chinese nuclear arsenal is compared with those of other great powers. Third, shifts in Chinese nuclear strategy and posture are used to describe its revisionist nature. After that, the characteristics of the new international order are presented. Finally, based on particular features, it is demonstrated how the Chinese nuclear rise affects strategic stability and what the consequences are. Fourth, the conclusion summarizes the thesis, presents the main outcomes of the research, and opens a space for further elaborations of the topic.



## 2. Theoretical and Conceptual Framework

### *2.1 Building a Case for Balance of Power and Strategic Stability*

International relations are undoubtedly a dynamic field for research. A plethora of paradigms, modes of thinking, governing systems, and structural interactions have appeared and vanished while actors in one or another form have always been present. Precisely there lies the fundamental question: why do the changes in international relations occur? It looks like this thesis will be an attempt to gather various versions of the same answer to it. But our quest should begin far from the answer, anticipating even the question itself.

Academic expertise often tried to simplify international relations and make it understandable and predictable. Robert Gilpin provided a rational model comprising economic analysis to claim that natural state of the society is equilibrium, endangered in the situation when an actor perceives aggrandizement of its territory, influence, benefits as a feasible strategy: "A state will seek to change the international system through territorial, political, and economic expansion until the marginal costs of further change are equal to or greater than the marginal benefits"<sup>8</sup>. An interesting feature of this theory is that in the case of particular tendencies, the system itself will try to restore equilibrium. Obviously, it is not always possible. When collapse of the equilibrium cannot be reversed, a new one must be generated and that is where the real change is coming into play, not the adjustment of the incumbent: "[T]he principal mechanism of change throughout history has been war, or what we shall call hegemonic war (i.e., a war that determines which state or states will be dominant and will govern the system)"<sup>9</sup>.

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<sup>8</sup> Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981) 10

<sup>9</sup> Gilpin 15. This theory is particularly connected with the monumental classical realist study of E.H.Carr where he among other thesis launches one about the violence inherent to the weak countries and peaceful resolution means to those stronger. Actions of weak countries regularly end in two ways: failure or war to overthrow the incumbent. Edward H. Carr, *Twenty Years' Crisis: An Introduction to the Study of International Relations, 2d ed.* (New York, NY: Harper and Row, 1946), pp. 129–132.

For the critique of Gilpin look at: Daniel Garst, "Thucydides and Neorealism," *International Studies Quarterly* 33(1), 1989: 3-28. Steffano Guzzini "Realisms at War: Robert Gilpin's Political Economy of Hegemonic War as a Critique of Waltz's Neorealism," *Working Paper, Copenhagen Peace Research Institute* 11, 2002. Booth appraised the work in his review of the book: Ken Booth, "War and Change in World Politics," *International Affairs* 58(3), 1982: 507-507.

Closely connected with Gilpin stands an attempt on generating a rule which will be applicable even to the distant future<sup>10</sup>. Namely, it is a science of recurrent patterns or the so-called long cycles in world politics, developed by George Modelski. Systemic change is here characterized as an evolution and has four distinct characteristics: regularity, progressive non-uniformity, global reach in space, and limited reach in time<sup>11</sup>. Although relevant for certain historical cases, Modelski did not achieve a sufficient level of generalization to validate his theory on the universal level. Nevertheless, he established a category of regularity of transition<sup>12</sup>. Regardless of the character of the transition, the aim of the previous part was to assess the existence of change and even the fundamental existence of its permanence. This will enable us to define what one actor needs to achieve in order to become ruler of the system or to challenge already existent ones.

Great powers have been elite members of any given international system. Regardless of its number or strength, its presence has been a necessary condition. For a country to attain that status, a number of different traits is needed. According to Waltz, every great power needs to score well in "size of population and territory; resource endowment; military strength; political stability; and competence"<sup>13</sup>. Here, the classical Waltzian unit-level approach can provide answers confined to a statistical analysis and probability. Jack Levy gives more in-depth strategically utilizable assessment when he claims that great power must have the military capability to project global influence, a security concept aligned with global balance and assertiveness in defending its integrity<sup>14</sup>. It is of particular importance to go beyond the mere attributes of a great power and to see whether we can establish criteria to recognize those arising to the status. The ultimate aim of survival in a competitive system causes the first of the two

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<sup>10</sup> Morton Kaplan discussed the possibility of using generalizations in the science of IR: "The theory of international politics normally cannot be expected to predict individual actions because the interaction problem is too complex and because there are too many free variables. It can be expected, however, to predict characteristic or modal behavior within a particular kind of international system." 77. Morton A. Kaplan, "Balance of Power, Bipolarity and Other Models of International Systems," *The American Political Science Review* 51(3), 1957: 685.

<sup>11</sup> George Modelski, *Long Cycles in World Politics* (London: Palgrave Macmillan, 1987) 6-7.

<sup>12</sup> Modelski 11.

<sup>13</sup> Kenneth N. Waltz, *Theory of International Politics* (Reading, MA: Addison-Wesley, 1979) 131. He adds that all the capabilities need to be present, it is not possible to claim preponderance in one or couple of them. The comprehensive combination should be molded with the deliberation to use it for the benefit of pertinent interests.

<sup>14</sup> Jack Levy, *War and the Modern Great Power System, 1495-1975* (Lexington, KY: University Press of Kentucky, 1983) 11-18

points suggested by Layne: "sameness" effect and balancing<sup>15</sup>. In the end, strategies of great powers have to be similar if different just by the modalities of adjustment to a particular order.

A country that satisfies all of the abovementioned criteria certainly is the USA after the Cold War. Many authors declared that unipolarity will be a long-lasting consequence of the presence of just one great power, without even close competitors<sup>16</sup>. Some of them in liberal nirvana even launched theories about benevolent hegemonism and successful domination<sup>17</sup>. In more moderate terms, without any doubt, the US was by far the strongest actor and the only great power. The question was how long it could last without structural resistance. No longer than a couple of years was needed for academics to start predicting a serious decline of the unipolar system<sup>18</sup>. Traditionally critical Waltz did not agree with the predictions of American decline. Instead, he claimed: "The structure of international politics is changing not because the United States suffered a serious decline, but because the Soviet Union did so, while Japan, China, and Western Europe continued to progress impressively"<sup>19</sup>. Some of the actors Waltz mentioned certainly are fulfilling the prophecy, either because of a pragmatist policy or convenient strategic conditions. Mearsheimer wrote that the unipolar era must have been short and that liberal international order contained seeds of its own destruction both because of endogenous and exogenous factors<sup>20</sup>. The difference between classical theories where the system is constructed when a great power takes primacy and more modern ones is precisely in the fact of international orders being created when contenders of the incumbent come to power. Of a monumental importance is the power transition

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<sup>15</sup> Christopher Layne, "The Unipolar Illusion: Why New Great Powers Will Rise," *International Security* 17(4), 1993: 5-51.

<sup>16</sup> Krauthammer coined the term "unipolar moment": Charles Krauthammer, "The Unipolar Moment," *Foreign Affairs* 70(1), 1990: 23-33. Fukuyama was even more optimistic with the declaration of the ultimate victory of liberal capitalism: Francis Fukuyama, *The End of History and the Last Man* (New York, NY: Free Press, 1992).

<sup>17</sup> As could be expected Ikenberry was very vocal: John G. Ikenberry, "Institutions, Strategic Restraint, and the Persistence of Postwar Order," *International Security* 23(3), 1998: 43-78. Look also at: Joseph S. Nye, *Bound to Lead: The Changing Nature of American Power* (New York, NY: Basic Books, 1990) and William C. Wohlforth, "The Stability of a Unipolar World," *International Security* 24(1), 1999: 5-41. All of the authors share somewhat opportunistic approach grounded in institutional hopes rather than reality on the ground. Military power is almost non-existent in those works and limited to multilateral initiatives and extended deterrence umbrella, mostly under the NATO alliance.

<sup>18</sup> Layne, The Unipolar Illusion 99. John J. Mearsheimer, "Back to the Future: Instability in Europe after the Cold War," *International Security* 15(1), 1990: 5-56. 102. Christopher Layne, "The Unipolar Illusion Revisited: The Coming End of the United States' Unipolar Moment," *International Security* 31(2), 2006: 7-41.

<sup>19</sup> Kenneth N. Waltz, "The Emerging Structure of International Politics," *International Security* 18(2), 1993: 71.

<sup>20</sup> John J. Mearsheimer, "Bound to Fail: The Rise and Fall of the Liberal International Order," *International Security* 43(4), 2019: 7-50.

theory studies by Organski. One of his formulations almost became a formula in the IR research field:

An even distribution of political, economic, and military capabilities between contending groups of states is likely to increase the probability of war; peace is preserved best when there is an imbalance of national capabilities between disadvantaged and advantaged nations; the aggressor will come from a small group of dissatisfied strong countries; and it is the weaker, rather than the stronger power that is most likely to be the aggressor.<sup>21</sup>

Rise of state actors, but also other forms of the same phenomena are fundamental parts of the first major theoretical pillar of this thesis and it is a structural realist notion balance of power.

Put in simple words by Waltz: "In international politics, overwhelming power repels and leads other states to balance against it"<sup>22</sup>. Balancing is the behavior of those actors who want to prevent hegemony because often it can be their only way to survive in a system marked by anarchy or the lack of provider of authority higher than particular states themselves. Obviously, from there stems the label self-help system to delegate autonomy precisely to the actors that constitute the system. It is further argued that "The expectation is not that a balance, once achieved, will be maintained, but that a balance, once disrupted, will be restored in one way or another"<sup>23</sup>. If balance is endangered by a hegemon, this theory predicts various forms of systemic challenges to the hegemon itself. However, other realist scholars provided a meaningful critique of this theory. For example, Walt claimed that much more than power, survival threat is the factor upon which a state engages in balancing<sup>24</sup>. Schweller challenged the other part of the theory and showed empirically that bandwagoning is a much more regular strategy than

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<sup>21</sup> A.F.K. Organski and Jacek Kugler, *The War Ledger* (Chicago, IL: Chicago University Press, 1980) 19. For even more comprehensive overview of causes of war and predictive warfare theories look at: A.F.K. Organski, *World Politics, Second Edition* (New York, NY: Alfred A. Knopf, 1968).

<sup>22</sup> Kenneth N. Waltz, "America as a Model for the World? A Foreign Policy Perspective," *PS: Political Science and Politics* 24(4), 1991: 669. Levy and Thompson provide strong evidences that every historical attempt of hegemony in Europe was balanced by an alliance or other forms of organized resistance: Jack S. Levy and William R. Thompson, "Hegemonic Threats and Great-Power Balancing in Europe, 1495-1999," *Security Studies* 14(1), 2005: 1-33.

<sup>23</sup> Waltz, Theory 128.

<sup>24</sup> Stephen M. Walt, *The Origins of Alliances* (Ithaca, NY: Cornell University Press, 1987) 21-33.

balancing when a state wants to adjust its policy to the existing order<sup>25</sup>. Mearsheimer even claimed that balance of power is strictly limited to "a function of the tangible military assets that states possess, such as armored divisions and nuclear weapons"<sup>26</sup>. The transition from an acknowledgment of the change in world politics, overdetermination of great powers as system generators to the various forms of balancing as the reaction to hegemony, inevitably leads us towards the other big theoretical pillar of the thesis and that is strategic stability. However, before that, two issues have to be resolved together with its interconnection. Those are the definition of stability and how it correlates with the notion of polarity of a certain system.

Pretty intuitively, stability is defined as a tendency of a system to keep its present characteristics of equilibrium<sup>27</sup>. It is also possible to describe it in a negative way as a consequence of structural violence which would endanger the system<sup>28</sup>. Stability as a term borrowed from natural sciences is definitely a key to reading international systems in a proper manner, especially when applied to the polarity of the system as a set of models around which strategic dynamics revolves.

Polarity is at its simplest defined as a distribution of power within a system<sup>29</sup>. We can differentiate between unipolarity, bipolarity, tripolarity, multipolarity, on the basis of how many dense concentrations of power exist. Many would identify a number of poles with a number of great powers<sup>30</sup>. A long-lasting debate in the international relations field is that of correlation between stability and polarity. Namely, is it possible to credibly claim that one system is more stable than others solely on the basis of its polarity?

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<sup>25</sup> Randall L. Schweller, "Bandwagoning for Profit: Bringing the Revisionist State Back In," *International Security* 19(1), 1994: 87-89. Waltz will later defend his thesis with the claim that bandwagoning is just a subset of balance of power: Kenneth N. Waltz, "Structural Realism after the Cold War," *International Security* 25(1), 2000: 5-41.

<sup>26</sup> John J. Mearsheimer, "Structural Realism" *International relations theories: discipline and diversity*, eds. Timothy Dunne, Milja Kurki, Steve Smith (Oxford: Oxford University Press, 2010) 72.

<sup>27</sup> Deutsch and Singer defined stability as "the probability that the system retains all of its essential characteristics." Karl W. Deutsch and David J. Singer, "Multipolar Power Systems and International Stability," *World Politics* 16(3), 1964: 390-406. A number of different definition can be found in: Michael Brecher, Patrick James, Jonathan Wilkenfeld, "Polarity and Stability: New Concepts, Indicators and Evidence," *International Interactions: Empirical and Theoretical Research in International Relations* 16:1, 1990: 49-80.

<sup>28</sup> For the correlation between stability and structure look at Waltz, Theory 161-162.

<sup>29</sup> Frank W. Wayman, "Bipolarity and War: The Role of Capability Concentration and Alliance Patterns Among Major Powers, 1816-1965," *Journal of Peace Research* 21, 1984: 61-78. Jeffrey A. Hart "Power and Polarity," *Polarity and War*, ed. Alan Ned Sabrosky (Boulder, CO: Westview Press, 1985) 25-40.

<sup>30</sup> Look for example in: Mark L. Haas, "Ideological Polarity and Balancing in Great Power Politics," *Security Studies* 23(4), 2014: 715-753.

Expectedly, Waltz carried out an analysis that bipolarity is the most stable order justifying it with the relation of mutuality of the two existing sides and the all but non-existent possibilities of a prospective third side to arise<sup>31</sup>. Kaplan had an opposite idea: "[C]learly the probability of such an outcome (*not eliminating smaller powers from the competition*, L.N.) necessary to the stability of the system rises if the number of essential actors is greater than three"<sup>32</sup>. Combining the two opinions resulted in what Rosecrance advocated (an idea particularly significant for this thesis as will be demonstrated in further chapters) as bi-multipolarity to be the most stable system because of the interaction of different dyads where conflicting interests between the two actors grow into a systemic issue<sup>33</sup>.

Many of the aforementioned concepts were developed under the heavy shadow of a nuclear threat. Being that the period of American nuclear primacy or bipolar nuclear parity, it was obligatory having in mind an indispensable fact that there are certain weapon systems that can alternate not just the present system, but also the whole planet with inherent annihilatory potential. Some authors argue that the appearance of nuclear weapons did not condition on itself the change of the international system<sup>34</sup>. Its strategic use will mark the beginning of a new era. Numerous concepts prominently used throughout the chapters to come are essentially connected with the first wave of research on nuclear weapons. In his "Strategy in the Missile Age" Brodie will popularize concepts such as preventive and second nuclear strike and limited and total war<sup>35</sup>. Together with Kahn's science of nuclear escalation and Schelling's concepts of nuclear behavior, coercion and bargaining, it formed a solid basis for further understanding of this exceptional phenomena<sup>36</sup>. However, it will not be until the destructive potential of the weapons will pave a way for the policy, strategy and paradigm of deterrence that we can discuss about interventions

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<sup>31</sup> Kenneth N. Waltz, "The Stability of a Bipolar World," *Daedalus* 93(3), 1964: 881-909.

<sup>32</sup> Kaplan, Balance 689.

<sup>33</sup> Richard N. Rosecrance, "Bipolarity, Multipolarity, and the Future," *Journal of Conflict Resolution* 10, 1966: 314-327.

<sup>34</sup> Steve Weber, "Realism, Detente, and Nuclear Weapons," *International Organization* 44(1), 1990: 55-82. For a somewhat different look at the topic where emphasize is put on the permanence of nuclear disruption of international relations look at: William Walker, *A Perpetual Menace: Nuclear Weapons and International Order* (London: Routledge, 2011). Earlier, but seminal study was written at the dawn of the nuclear era and presents a valuable insight into the topic: Bernard Brodie, *The Absolute Weapon: Atomic Power and World Order* (Boston, MA: Harcourt, 1946).

<sup>35</sup> Bernard Brodie, *Strategy in the Missile Age* (Princeton, NJ: Princeton University Press, 1959).

<sup>36</sup> Herman Kahn, *On Escalation: Metaphors and Scenarios* (Piscataway, NJ: Transaction Publ., 2009). Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 2008). Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, MA: Cambridge University Press, 1981).

of nuclear weapons in what we call international order or system. Deterrence is a rational, preventive and de-escalatory strategy that seeks to prevent an adversary from taking certain actions, either by means of punishment or denial<sup>37</sup>. However, rationalists will always notice a bit of irrationality in the strategy that wants to prevent escalation with essentially escalatory action: "We thus have the anomaly that deterrence is meaningful as a strategic policy only when we are fairly confident that the retaliatory instrument upon which it relies will not be called upon to function at all"<sup>38</sup>. Bipolar settings of the Cold war brought the two superpowers to thinking that precisely mutual retaliation will lead to a certain level of stability. That doctrine will become known as mutual assured destruction.

Deep and multilayered are connections between nuclear weapons and stability in systems with different polarities. In an early article Ciro Zoppo argues that despite many thinkers boasting of stability of bipolarity, it is contingent on the level of aggression restraints through the strategic limitations or arms control<sup>39</sup>. Accordingly, on the basis of historical cases, Mearsheimer claimed that undermining of deterrence is much more common in multipolar than in bipolar environment<sup>40</sup>. His famous formulation goes that the most unstable form of international relations is unbalanced multipolarity, the one with an aspiring hegemon<sup>41</sup>. However, precisely the contingency or artificial character of bipolar stability prompted Waltz to stress the way around and claim that another polarity brings more stability: "And since nuclear states easily generate second-strike forces, they do not need one another's help at the strategic level. Strategically, nuclear weapons make alliances obsolete, just as General de Gaulle used to claim"<sup>42</sup>. Without entering into the sophisticated discussion on alliance making, it is obvious that their lack provokes multipolarity and generates repeatedly a kind of stability guaranteed by mutually assured retaliation.

With this longer theoretical way, we have finally settled down to the debate on strategic stability. Namely, two concepts are here strongly connected: stability with the meaning of balance within

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<sup>37</sup> For the sum of definitions and meaning of deterrence, look at: Therese Delpech, *Nuclear Deterrence in the 21<sup>st</sup> Century* (Santa Monica, CA: Rand Corp., 2012). About economic rational model of deterrence look at: Keith B. Payne, "Understanding Deterrence," *Comparative Strategy* 30(5), 2011: 393-427.

<sup>38</sup> Bernard Brodie, *The Anatomy of Deterrence* (Santa Monica, CA: 1958) 5.

<sup>39</sup> Ciro E. Zoppo, "Nuclear Technology, Multipolarity, and International Stability," *World Politics* 18, 1966: 579

<sup>40</sup> Mearsheimer, Back 24.

<sup>41</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York, NY: W.W. Northon and Co., 2001) 44.

<sup>42</sup> Waltz, *The Emerging* 73.

a system and strategic being an indicator of the strategic arsenals of certain countries, nuclear weapons. Elridge Colby puts together certain concepts to elucidate the nature of strategic stability: a transition from first to second-strike capability, nuclear threat, the credibility of the threat and clear command, communications and control systems<sup>43</sup>. It would be rational to think about first-strike capability as a cornerstone of strategic stability: "[A] worthy conception of strategic stability must incorporate the basic goods contained in the notion of first-strike stability. But first-strike stability cannot alone suffice to create genuine stability"<sup>44</sup>. All the chances are that stability under the auspices of nuclear weapons is pertinent to the sphere of political, traditionally reserved for deterrence. Although the borders are always blurred between military and political domains, here a transition from first-strike to second-strike capability is a signal that civilian strategists have taken the primacy in decision-making. Basically, a credible threat of the first-strike is used to guide us towards the second-strike paradigm for the sake of stability:

The point of nuclear use under this conception of strategic stability would definitively not be to attempt to break out of a situation of mutual vulnerability, given such an effort's toxic combination of futility and dramatic escalatory impetus, but rather to signal to an opponent that he had transgressed a most vital interest, to demonstrate one's resolve about climbing the imperfectly controllable ladder of escalation, and to inflict pain on the opponent to attempt to dissuade him from pursuing his course of action.<sup>45</sup>

Essentially, what Colby projects is a military-political eclectic approach to strategic stability where it signifies a cognitive space of decision-making combined with the permanent threat of using the existing strategic capabilities. Potentially devastating spasmodic tendencies in this concept drive rational actors towards the avoidance of nuclear showoff.

Miles has a slightly more reductionist approach to the strategic stability: "In my view, strategic stability is most useful as a concept if defined in terms of stabilizing or destabilizing forces exerted by the strategic capabilities themselves, as opposed to political drivers, desires, and

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<sup>43</sup> Elridge A. Colby, "Defining Strategic Stability: Reconciling Stability and Deterrence," *Strategic Stability: Contending Interpretations*, Elbridge A. Colby and Michael S. Gerson, eds. (Carlisle Barracks, PA: U.S. Army War College, 2013) 48-57.

<sup>44</sup> Colby 52.

<sup>45</sup> Colby 57.



intentions"<sup>46</sup>. Obviously, he relates the concept strictly with the crisis stability where belligerents communicate in terms of concrete weapons systems to be used in case of conflict. Therefore, he claims that mythical retaliatory capability does not lead to the stability within a system, but ensures the clear path for other stakeholders to take over: "[S]urvivable second-strike forces do not necessarily give rise to systemic forces that drive the crisis intensity back towards its equilibrium position. At best, they remove nuclear weapons as a driver and allow the crisis to continue to evolve under political forces"<sup>47</sup>. In other words, where political forces govern the process, strategic stability is no longer present. Opposing views are numerous with one of the most prominent being that of Zenel Garcia who says that there is "a set of interdependent principles which are encapsulated in strategic stability: guaranteed second-strike capability and mutual vulnerability"<sup>48</sup>. As much reductionist as the previous one, Garcia launches a concept that is entirely focused on strategic potential within the narrow confines of the system, without generating further concerns about the applicability of the concept on the other areas of governance or processes of decision making. Precisely this has prompted him to claim that "developments in the second nuclear age are effectively undermining the pillars of strategic stability"<sup>49</sup>. Those challenges are multiplicity of nuclear actors, asymmetric and hybrid nuclear threats, non-state actor acquisition of nuclear weapons and many others<sup>50</sup>.

Strategic stability is in this thesis defined as a set of complex relations among the state actors in possession of nuclear weapons, through which the possibility of the nuclear escalation is lowered to a virtually non-existent level. Six pertinent characteristics are used, all of them encumbered with Cold war strategic logic. Therefore, one of the major aims of the thesis is to see how those experienced shifts in a different environment. Here the characteristics will be enlisted:

- Second-strike capability
- Mutual vulnerability
- Predictability

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<sup>46</sup> Aaron R. Miles, "The dynamics of strategic stability and instability," *Comparative Strategy* 35(5), 2016: 425.

<sup>47</sup> Miles 426.

<sup>48</sup> Zenel Garcia "Strategic Stability in the Twenty-first Century: The Challenge of the Second Nuclear Age and the Logic of Stability Interdependence," *Comparative Strategy* 36:4, 2017: 354.

<sup>49</sup> Garcia, Strategic 355.

<sup>50</sup> For the study on the so called second nuclear age and pertinent new issues arising with it look at: Colin S. Gray, *The Second Nuclear Age* (Boulder, CO: Lynne Rienner Publ., 1999) and Paul Bracken, *The Second Nuclear Age: Strategy, Danger, and the New Power Politics* (New York, NY: St Martin's Press, 2013).

- Single-domain operability
- Crisis and arms race stability
- Systemic polarity.

Through those traits, strategic stability is postulated as a set of rational interactions between the great powers in the bipolar system. Although some of the characteristics are overlapping, it is necessary to point out unit level and systemic level markings so that analysis of distinct post-Cold war notions becomes more meaningful.

## ***2.2 Revisionism, Imperialism and Beyond***

As the argument of the thesis goes, there is a need to carefully consider the behavior of a rising power. Two are the models: status quo and revisionism. The former will not be taken into account since the thesis foresees that theories describing the peaceful rise of China and responsible stakeholder dynamics are missing the point. However, status quo remains a highly important part of the theoretical and general scholarly approach to this topic<sup>51</sup>.

The other model of interpreting the rise of great powers is to claim that their goal is to overthrow the incumbent order and install the new one. Their rise is extra-systemic with war as the primary, but not exclusive means to achieve the goal. Many are the names or attributes assigned to those states: revisionist (Organski), expansive (Weber), imperialist (Morgenthau), unsatiated powers (Schuman), power-maximizing (Schweller), revolutionary (Kissinger), aggressors (Jervis)<sup>52</sup>. For

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<sup>51</sup> Some of the works that more or less thoroughly give insights into the theory of status quo are: Hans J. Morgenthau, *Politics among Nations: The Struggle for Power and Peace* (New York: Alfred A. Knopf, 1948) 22-60. Michelle Murray, *The Struggle for Recognition in International Relations: Status, Revisionism and Rising Powers* (New York, NY: Oxford University Press). Randall L. Schweller, *Unanswered Threats: Political Constraints on the Balance of Power* (Princeton, NJ: Princeton University Press, 2006). Douglas Lemke and William Reed, "Regime Type and Status Quo Evaluations," *International Interactions* 22(2), 1996: 143-164. Michelle Benson, "Status Quo Preferences and Disputes Short of War," *International Interactions* 33(3), 2007: 271-288. Alastair Iain Johnston, "Is China a Status Quo Power," *International Security* 27(4), 2003. Jason W. Davidson, *The Origins of Revisionist and Status-quo Powers* (London: Palgrave Macmillan, 2006). Andrew F. Hart and Bruce D. Jones, "How Do Rising Powers Rise?" *Survival* 52(6), 2010: 63-88. John J. Mearsheimer, China's Unpeaceful Rise, *Current History* 105.

<sup>52</sup> Organski, *World*. Morgenthau, *Politics*. Schweller, *Bandwagoning*. Max Weber, *From Max Weber: Essays in Sociology* (New York, NY: Oxford University Press, 1946). Henry A. Kissinger, *A World Restored: Castlereagh, Metternich, and the Problem of Peace, 1812-22*. (Boston: Houghton Mifflin, 1957). Robert Jervis, "Cooperation under the Security Dilemma," *World Politics* 30, 1978: 167-214. Friedrich L. Schuman, *International Politics: The*

the sake of this thesis, we will take imperialist and revisionist labels because of the semantic and strategic significance. Namely, for the state to be imperialist on the most general level it subsumes striving to aggrandize the resources on the disposal. Whether it is territory, influence or life standard, there is a tendency towards going beyond already existent. Revisionist states obviously tend to negate the status quo and replace the existing order<sup>53</sup>.

In his sharp distinction between the status quo and imperialist countries, Morgenthau claims that they have three inducements, three aims and three methods. Three motives for a country to become imperialist here are a probable victory in a major war, policy-burdened peace settlements and post-war transformations, reaction against already existing imperialism<sup>54</sup>. In an ingenious description of aims, he says: "The objective of imperialism can be the domination of the whole politically organized globe... Empire or hegemony of approximately continental dimensions... a strictly localized preponderance of power"<sup>55</sup>. It is now obvious that not the final level of influence is important in thinking about the negation of the status quo, but the very drivers of action and inherent aims. In doing so, three methods are present: military, political and cultural<sup>56</sup>. Most often, rising power will need to combine all three of them in order to confront the dominant state structure and cause rebalance with a system. Some authors will even claim that whole Westphalian order originates from imperialism because without it there would hardly be any sovereign state or law to regulate interstate behavior<sup>57</sup>. However, we will limit the discussion to the point of the fact that certain states use their resources to change the current system in any

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*Destiny of the Western State System, 4th ed.* (New York, NY: McGraw-Hill, 1948) 377-380. All of those pieces of academic work are excellent historical studies of what negation of status quo in world politics can mean and which forms it can take.

<sup>53</sup> Here can be of help concept of Thucydides trap which claims that natural drive of rising power is to overthrow the dominant one. Graham Allison, *Destined for War: Can America and China Escape Thucydides's Trap?* (London: Scribe, 2017). Lorenzo Bardia, "The Thucydides Trap and the Future of US-China Relations," *The International Spectator* 52(4), 2017: 157–158. For a great analytical overview of the other related strategic possibilities look at: Yang Yuan, "Escape both the 'Thucydides Trap' and the 'Churchill Trap': Finding a Third Type of Great Power Relations under the Bipolar System," *The Chinese Journal of International Politics* 11(2), 2018: 193–235.

<sup>54</sup> Morgenthau, Politics 34-35.

<sup>55</sup> Morgenthau, Politics 36.

<sup>56</sup> Morgenthau, Politics 38-42.

<sup>57</sup> Anthony Anghie, *Imperialism, Sovereignty and the Making of International Law* (Cambridge: Cambridge University Press, 2004). For the more general overview of the connection between war and making of the state look at: Charles Tilly, *Coercion Capital and European States AD 990-1990* (Cambridge, MA: Basil Blackwell, 1990) 1-38.

given era and the mere fact of change we established in the beginning, together with long cycles described by Modelski are pieces of evidence for this claim.

To avoid a territorial trap, the attribute imperialist can be substituted with revisionist. Davidson defines revisionist states as recluse: "Those states that will not incur costs to maintain the distribution of goods (territory, status, markets, expansion of ideology, and creation or change of international law and institutions) other than the defense of their own territory"<sup>58</sup>. A number of authors asked precisely the question of what motivates the state to overthrow the order. Mearsheimer writes about unfavorable balance of power and favorable cost-benefit analysis<sup>59</sup>. Zionts claims that strategic choices of revisionist states are made under the influence of domestic structure, domestic politics and elite ideology<sup>60</sup>. Again the truth is somewhere between domestic and international factors as demonstrated earlier by Murray, sometimes even stimulated by unhealthy ambitions of charismatic leaders<sup>61</sup>. It would be logical to expect that rising powers will always take balancing as their strategic platform. Mearsheimer and Waltz are among the prominent supporters of such a claim<sup>62</sup>. There are also different visions of strategies adopted by the revisionist powers. For example, the extensive study on bandwagoning written by Schweller claims that it is the most often promulgated strategy to confront the dominant power<sup>63</sup>. He further divides those on unlimited-aims revisionists (who are the bandwagon themselves) and limited-aims revisionists (who choose to bandwagon)<sup>64</sup>. A provisional conclusion can be the same as with status quo powers: neither status quo seekers are always dominant powers nor revisionist states are always balancers.

The hypothesis of this work is that a revisionist rising power in the current system will cause the appearance of emerging asymmetric triangular nuclear competition. With the exception of

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<sup>58</sup> Davidson 15.

<sup>59</sup> Mearsheimer, *The Tragedy* 5.

<sup>60</sup> David M. Zionts, "Revisionism and Its Variants: Understanding State Reactions to Foreign Policy Failure," *Security Studies* 15(4), 2006: 631-657.

<sup>61</sup> That fact would create a line of thought in international relations field that we should recognize a revisionist state when we see it, because Nazi Germany was the textbook example. For that theory, look at: Randall L. Schweller, "Tripolarity and the Second World War," *International Studies Quarterly* 37(1), 1993: 73-74. Davidson claims the same for Fascist Italy: Davidson 70-89.

<sup>62</sup> Mearsheimer, *The Tragedy* 8-11. "Only if survival is assured can states safely seek such other goals as tranquility, profit, and power. Because power is a means and not an end, states prefer to join the weaker of two coalitions," Waltz, *Theory* 126.

<sup>63</sup> Schweller, *Bandwagoning*.

<sup>64</sup> Schweller, *Bandwagoning* 93.

emerging which is self-explanatory because of the character of the rising great power and nascence of the new order, all the other elements will be explained.

Asymmetry has long been considered solely in terms of relative state capabilities. Womack offers an analytical definition: "An asymmetric relationship is one in which the smaller side is significantly more exposed to interactions than the larger side because of the disparity of capabilities, and yet the larger is not able to dictate unilaterally the terms of the relationship"<sup>65</sup>. In fact, the majority of interstate and other relations today can be deemed as asymmetric. Nevertheless, the notion has been mostly connected with warfare and therefore literature pool on the topic is vast, but not extremely useful for the current strategic environment<sup>66</sup>. Here, we want to highlight the transition from the asymmetry of power to the asymmetry of domains on the disposal of a certain actor. This is important because nowadays it is possible for North Korea to balance the US through the soft or asymmetric balancing<sup>67</sup> and for Israel to confront the whole Arab world<sup>68</sup>. If the traditional notion of asymmetry was applied, there would be even no theoretical way for countries in quantitatively unfavorable actors to prevail in certain conflicts. With the asymmetry of domains, Israel can exploit the advantages in nuclear and cyber domain, while North Korea can build upon its ambiguous nuclear policy to be the threat for US civilian and conventional assets. The notion that recently appeared to describe these phenomena is called cross-domain deterrence<sup>69</sup>. The essence of the concept is to exploit the domains in which weaker actor has an advantage over the strong actor and to deter it by imposing unacceptably

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<sup>65</sup> Brantley Womack, *Asymmetry and International Relationships* (Cambridge: Cambridge University Press, 2015) 10.

<sup>66</sup> Arreguin Toft writes about power and interests asymmetry: Ivan Arreguin-Toft, "How the Weak Win Wars: A Theory of Asymmetric Conflict," *International Security* 26(1), 2001: 93–128. For the mainstream view which limits asymmetry to non-state versus state conflicts look at: Rod Thornton, *Asymmetric Warfare: Threat and Response in the 21st Century* (Cambridge: Polity, 2007).

<sup>67</sup> Robert A. Pape, "Soft Balancing against the United States," *International Security* 30(1), 2005: 7–45 and T.V. Paul, "Soft Balancing in the Age of U.S. Primacy," *International Security* 30(1), 2005: 46–71.

<sup>68</sup> For this long-lasting conflict as a textbook example of modern notion of asymmetry, look at: Robin Geiß, "Asymmetric Conflict Structures," *International Review of the Red Cross* 88(864), 2006: 757-777.

<sup>69</sup> Some of the works on the topic are mainly connected to the cyber and space deterrence: Vincent Manzo, *Deterrence and Escalation in Cross-Domain Operations: Where Do Space and Cyberspace Fit?*, (Washington, National Defense University: Institute for National Strategic Studies, 2011). Erik Gartzke and Jon Lindsay, *Cross-Domain Deterrence: Strategy in an Era of Complexity*, (Toronto, International Studies Association Annual Meeting, 2014). James A. Lewis, *Cross-Domain Deterrence and Credible Threats* (Washington: Center for Strategic and International Studies, 2010). King Mallory, *New Challenges in Cross-Domain Deterrence* (Santa Monica, CA: RAND Corp., 2018).

asymmetric damage to its assets<sup>70</sup>. This is particularly important in relation to not fully research and utilized domains such as outer space since it presents a legitimate window of opportunity for emerging actors to take primacy.

The second part of asymmetric triangular relations is triangularity. Before assessing it as a particular system, it needs to be elucidated why "angularity" is favored term over "polarity" or "nodality". Namely, Haass argues that polarity is no longer useful nowadays: "The principal characteristic of twenty-first-century international relations is turning out to be nonpolarity: a world dominated not by one or two or even several states but rather by dozens of actors possessing and exercising various kinds of power. This represents a tectonic shift from the past"<sup>71</sup>. Schweller puts it in a rather systemic perspective by saying that variables of the process, not the structure of the system guides the dynamics of international relations today<sup>72</sup>. Following that, we can claim that for this thesis, a set of relations among the three great powers is not dense enough or structured enough to be labeled as polar. There are certain recurring patterns of cooperation and conflict, but a slightly mathematical outlook of angular conception seems to be more rational in the times of structural asymmetry of the system that can be equally labeled as "uni" and "multi" in any given sense<sup>73</sup>. Some of the basic characteristics of triangular systems are their indirect coercion<sup>74</sup>, distinct alliance making<sup>75</sup> and lack of stability<sup>76</sup>.

Triangular systems obviously do not generate as many strategic options as multiangular. Three poles are present and when we include all of the possible alliances, only five basic structures can be generated. Despite the number being so low, employment of other variables such as status quo and revisionism or symmetric and asymmetric can provide much more complications. Four basic models of triangular relations were provided by Lowell Dittmer, who divided every friendly

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<sup>70</sup> Malory 1-4.

<sup>71</sup> Richard N. Haass, "The Age of Nonpolarity: What Will Follow U.S. Dominance," *Foreign Affairs*, 87(3), 2008: 44.

<sup>72</sup> Randall L Schweller, "Entropy and the trajectory of world politics: why polarity has become less meaningful," *Cambridge Review of International Affairs*, 23:1, 2010: 147.

<sup>73</sup> Because of the existing literature and of word economy, tripolarity will be used from time to time.

<sup>74</sup> "In contrast to traditional one-on-one coercive bargaining, the concept of indirect coercion requires three independent actors engaged in a specific dynamic, in which the strategic choices of a particular actor are influenced by the threat of punitive action against a different actor." Michal Smetana and Jan Ludvik, "Theorising indirect coercion: The Logic of Triangular Strategies," *International Relations* 33(3), 2019: 456.

<sup>75</sup> Joseph L. Noguee and John W. Spanier, "The Politics of Tripolarity," *World Affairs* 139(4), 1977: 319-333.

<sup>76</sup> Michael Haas, "International Subsystems: Stability and Polarity," *The American Political Science Review* 64, 1970: 115-121.

country as + and every adversarial country as -. He labeled the systems as: ménage à trois (+ + +), romantic (+ + -), marriage (+ - -) and unit veto (- - -)<sup>77</sup>. Brantly Womack provides an upgrade to this by dividing those triangular structures on hard and soft where the difference is in hard having the mutual interaction of all the angles in the same time, while soft foresees any given bilateral interaction with the remaining angle<sup>78</sup>. The stability of such structures vary over time but rarely is in perfect balance because of the nature of international relations and anarchic international order. If we add asymmetry to the already complex network of structures, it becomes even trickier. Namely, if power or domain superiority are added we can have four types of every basic type of triangles. Womack designates them as: “symmetrical triangle” ( $X=Y=Z$ ), “single-head dual asymmetrical triangle” ( $X>Y=Z$ ), “twin-head dual asymmetrical triangle” ( $X=Y>Z$ ), and “triple asymmetrical triangle” ( $X>Y>Z$ )<sup>79</sup>. This gives us a complete overview of the possibilities of strategic mapping of triangular structures. In the empirical section of the thesis, particular models will be rarely used, but the final product of recurrent patterns of conflict and cooperation will eventually be identified with the most probable to fit to the currently existing interstate dynamics.

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<sup>77</sup> Lowell Dittmer, "The Strategic Triangle: An Elementary Game-Theoretical Analysis," *World Politics* 33:4, 1981: 485–516. For the even more detailed and sophisticated in-depth analysis grounded in historical examples look at: Randall L. Schweller, *Deadly Imbalances: Tripolarity and Hitler's Strategy of World Conquest* (New York, NY: Columbia University Press, 1998).

<sup>78</sup> Womack 102-103.

<sup>79</sup> Womack 103.

### 3. Overview of the Chinese Nuclear Rise

#### 3.1 *What Military Modernization*

A universally accepted wisdom says that a nation can be formed exclusively through the construction of a common enemy. Modern Chinese nation and state are not an exception to the rule. Namely, the defining feature of what we today call Chinese has been the conflict between communists under Mao Zedong and nationalists embodied in political movement Guomindang and its charismatic leader Chang Kai Shek. The outcome is evident, the People's Republic of China has been formed on the 1<sup>st</sup> of October 1949 under the communist government claiming simultaneous continuity and discontinuity with the long Chinese history<sup>80</sup>. From that protracted war full of both internal and external alliances and skirmishes, an array of enduring Chinese strategic concepts has been drawn. Among the most prominent are: active defense, people's war, protracted war, guerilla warfare<sup>81</sup>. The philosophy behind these concepts can easily be inferred as winning the nation rather than the government. That is why Wasif Khan describes Chinese strategists of the era as "[they] were not men of the staff colleges or Ivy League; theirs was a peasant wisdom, honed in combat and despair"<sup>82</sup>. Albeit somewhat poetical, it can be evidence of the initial simplicity and possibly naivety of the strategy that saw international relations as an area of mutual trust and respect. That is precisely why over the years, Mao Zedong was dragging his country into a willful exile, torn between proclaimed neutrality and harmful *paranoia* of an aging leader. However, it is beyond a doubt that Mao had some red lines which could not be crossed without serious consequences. The first was the territorial integrity of China since it would be unimaginable to see the end of unification that had been paid in blood. The second line was a product of national anxiety where Mao was "pursuing balance of power politics as

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<sup>80</sup> "Four-thousand-year-old Great China, Mao Zedong observed in 1920, was mere form, not reality. It had no foundation. To construct a large country, one first needed to build up smaller regions." Sulmaan Wasif Khan, *Haunted by Chaos - China's Grand Strategy from Mao Zedong to Xi Jinping* (Cambridge, MA: Harvard University Press, 2018) 9.

<sup>81</sup> M. Taylor Fravel, "The Evolution of China's Military Strategy: Comparing the 1987 and 1999 Editions of Zhanluexue," *China's Revolution in Doctrinal Affairs: Emerging Trends in the Operational Art of the Chinese People's Liberation Army*, eds. James Mulvenon and David Finkelstein (Alexandria, VA: CNA Corp., 2005) 82-84.

<sup>82</sup> Wasif Khan 8.



shrewdly as any grand strategist of his time, as well as by using a military that had developed dramatically from the guerrilla band he had started out with"<sup>83</sup>. This inevitably leads us to observe the significance of the military for conducting such a grand strategy. Therefore, core missions of the military will be analyzed together with its adaptation to certain historical periods through the process that will much later become known as military modernization.

The three main interests or drivers of Mao's regime can be identified as security, sovereignty, development<sup>84</sup>. As was abovementioned, security has been the task of survival in a bipolar world through the implementation of a balance of power, while sovereignty meant keeping the national unity intact. The third driver, development, is interpreted as a natural wish of a significant civilization and vast country to catch up with the great power of the time. Although economic factors are often stressed, Mao Zedong thought that a mighty military apparatus will enable you to sit at the table where global outlooks are designed. That is why it needed urgent modernization. As Ghosh put it, there was no doubt that the military should be modernized, the only concern was how to modernize it<sup>85</sup>. With minor or major aberrances, modernization drive will be followed by other Chinese leaders. Here, bearing the risk of excessive simplification, three modernization efforts will be briefly presented with the logical focus on the most recent one.

Starting with the period of Mao when turmoil in international relations was a new normal, the People's Liberation Army (PLA) had a task of comprehensive assurance both against external threats and inner leftovers of nationalist ideology. To do so, efforts were required to modernize tools and inherent doctrines. As Mao spoke: "We must have not only more aircraft and cannons (conventional weapons) but also atomic bombs; we must have not only what other countries have but also what other countries do not have"<sup>86</sup>. Faced with the reality of the amount of time needed to develop new, for example, nuclear technology, Chinese leadership started thinking on how to connect the existing strategic posture with the potential influence of modernization on it. To enlist all of the ideas or plans would be impossible and impractical, but few of the most

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<sup>83</sup> Wasif Khan 126.

<sup>84</sup> Timothy R. Heath, et.al., *The PLA and China's Rejuvenation: National Security and Military Strategies, Deterrence Concepts, and Combat Capabilities* (Santa Monica, CA: RAND Corp., 2016) 14.

<sup>85</sup> S.K. Ghosh, "China's Military Modernization Programme," *China Report 14(4)*, 1978: 68.

<sup>86</sup> "New China News Agency (NCNA) and Radio Peking, 20 January 1978." As quoted in: Ghosh 67.

important are as follows<sup>87</sup>. Defense of mainland China is done through the protection of peripheral areas since they are neuralgic points if we consider the surface of the country. That is why PLA required stronger territorial defense and anti-armor capabilities. However, infantry attack was considered as the least probable, so much more focus was put on modern theater-air, anti-ship and anti-submarine technologies. Defense against attack on the mainland was divided into two parts. Non-nuclear attack was to be countered by the protection of industrial areas and single facilities while advancing second-strike capability would deter prospective nuclear attacks. In doing so, China relied heavily on Russian technology and know-how, with completely indigenous production being all but non-existent. It should also be noted that modernization was completely oriented towards defensive technology, in accordance with the overall Chinese strategic posture.

Deng Xiaoping had inherited grave internal issues from Mao and decided to conduct a comprehensive reformist policy. Dreams about China joining the club of great powers were dispersed in the cloud of strikingly modest policy of being under the radar. At the same time, China experienced more inclusion and openness to the outer world. For PLA, the Dengist era was not among the most prosperous since it was relatively marginalized by the overwhelming economic and social reforms. Deng would claim that there will be no major wars during his life and that warfighting strategy should be substituted with peacetime development<sup>88</sup>. It is understandable, though, that PLA is not left at its own, modernization efforts still persist, just in another form. Primarily, one-purpose military production was substituted with the dual-use technology. This meant further development of civilian support for the development of military technology. Some other principles were "aimed at improving the Chinese military's weapons and equipment under existing conditions"<sup>89</sup>. Aside from the fact of PLA being less significant when compared to the Maoist era, under Deng China will build a completely indigenous nuclear arsenal, acquire precision strike capabilities and start setting standards in certain cutting edge technology production, all of which will be described in chapters to come. Periods of Jiang

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<sup>87</sup> Following measures enlisted in Edward Luttwak, "Military Modernization in the People's Republic of China: Problems and Prospects," *Journal of Strategic Studies* 2(1), 1979: 6-7.

<sup>88</sup> Hui Zhang, "The History of Fissile-material Production in China," *The Nonproliferation Review* 25(5-6), 2018: 16.

<sup>89</sup> Hongxun Hua, "China's Strategic Missile Programs: Limited Aims, not "Limited Deterrence", " *The Nonproliferation Review* 5(2), 1999: 62.

Zemin and Hu Jintao were rather stable and without profound military modernization tendencies. Those two leaders were oriented towards the softer, doctrinal reforms<sup>90</sup>.

The emergence of Xi Jinping as a charismatic paramount leader marked the renewal of Maoist policies, adapted for the contemporary geostrategic outlook<sup>91</sup>. Unprecedented multifaceted changes occurred in China since Xi has taken power. As will later become obvious, PLA regained its major role and became one of the central actors on the domestic, as well as on the foreign plan. Before digging deeper into the last wave of reforms, it was proved that there are principal factors that will determine the pace of development in China, including military modernization and reorganization: mobilization of resources, internal stability and external cooperation<sup>92</sup>. If we compare the first two modernizations under Mao and Deng with the one of Xi, we will see critical differences. Mao Zedong definitely mobilized all the available resources to invest in the PLA, but the reason for that was the lack of the other two factors. Namely, he had permanently unstable domestic affairs because of nationalists and because of the other currents opposing his authoritarian rule (e.g. Gang of Four). Nonetheless, he did not have any reliable external partner since being a third way in a bipolar system brings certain obstacles to foreign relations. After him, Deng had internal stability, but he did not want to cooperate closely with any of the existing major actors on the international scene. Furthermore, his policy was to invest in other parts of the state apparatus which was a clear path to the impediment of military modernization. Finally, Xi has all three factors fulfilled: domestic affairs are steady without major setbacks, externally China is involved in a number of supranational, bilateral, multilateral

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<sup>90</sup> Jiang Zemin launched two important initiatives. First, the two fundamental transformations included: "PLA to transform itself, (1) from an army preparing to fight local wars under ordinary conditions to an army preparing to fight and win local wars under modern, high-tech conditions, and (2) from an army based on quantity to an army based on quality" David Finkelstein, *Get Ready for the Second Phase of Chinese Military Reform* (Alexandria, VA: CNA Corp., 2017) 3.

Second, certain areas were to be adjusted for the production of dual use technology in the so called 863 Plan: aerospace technology, electronic information technology, strategic defense technology, deep-strike counterattack technology, laser-optic technology, and non-conventional and conventional materials technology. Harlan Jencks, "The General Armament Department," *The People's Liberation Army as Organization: Reference Volume v1.0*, eds. James Mulvenon and Andrew N.D. Yang (Santa Monica, CA: RAND Corp., 2000), pp. 273-308.

<sup>91</sup> For example, modern Chinese strategists are adapting Maoist concept of inland warfare for the high-tech informationized conditions in order to try to reduce the strength of an adversary by attracting it as close as possible to the Chinese mainland and then waging a decisive war in the well-known theater. Michael S. Chase and Arthur Chan, "China's Evolving Strategic Deterrence Concepts and Capabilities," *The Washington Quarterly* 39(1), 2016: 127-129.

<sup>92</sup> Ghosh 76.

initiatives and staggering economic growth provides enough resources for the sustainable development policy.

Sweeping reforms of the PLA and adjacent civilian agencies started in 2015., provoking some authors to compare it to the Goldwater-Nichols act of 1986., that completely changed the US defense system<sup>93</sup>, while others claim that PLA is becoming redder<sup>94</sup> or finally focused on campaigns rather than abstract art of military strategy<sup>95</sup>. In order to make the scope of reforms more comprehensible, it should be divided into three main pillars: political, institutional, operation<sup>96</sup>.

Following the overall character of Xi's governance, PLA is being modernized in accordance with the grand strategic posture. Without the intent to say that it is becoming just another instrument, doctrine and capabilities are employed in a way respondent to the expectation of the executive government branch. On the broadest level, the political system is "aligning China's military prowess with its regional and global interests"<sup>97</sup>. Emanations of such a policy are best tracked on the regional level where PLA is involved in the so-called securitization of core interests (Taiwan, South and East China Sea)<sup>98</sup>. New technologies are following the trend since much of the military arsenal is adjusted exclusively for the scenario of regional escalation.

Although not critical for this piece, the institutional pillar of modernization displays an in-depth character of the process. The first change that occurred was substituting the Maoist concept of military regions with the more useful system of theater commands that enabled PLA to create a joint staff department and unite previously separated military branches<sup>99</sup>. It is very important to note that nuclear arsenal was elevated to the level of autonomous military branch called People's Liberation Army Rocket Force (PLARF), cutting its vital dependence on ground forces.

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<sup>93</sup> Phillip C. Saunders and Joel Wuthnow, "China's Goldwater-Nichols? Assessing PLA Organizational Reforms," *Joint Force Quarterly* 82(3), 2016: 68–75.

<sup>94</sup> David Finkelstein, *Initial Thoughts on the Reorganization and Reform of the PLA* (Alexandria, VA: CNA Corp., 2016) 17-18.

<sup>95</sup> Paul H. B. Godwin, "Changing Concepts of Doctrine, Strategy and Operations in the Chinese People's Liberation Army 1978-87," *The China Quarterly* 112, 1987: 575.

<sup>96</sup> Finkelstein, *Initial* 4.

<sup>97</sup> Cortez A. Cooper III, *Testimony presented before the U.S.- China Economic and Security Review Commission, PLA Military Modernization: Drivers, Force, Restructuring, and Implications* (Washington: USCESRC, 2018) 1

<sup>98</sup> Zenel Garcia, *China's Military Modernization, Japan's Normalization and the South China Sea Territorial Disputes* (Cham: Palgrave Pivot, 2019) 46.

<sup>99</sup> Finkelstein, *Get Ready* 1.

Command and Control (C2) structures were affected by reforms as well, together with putting stress on a currently used notion of Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR).

Finally, operational modernization was bluntly defined by Chinese officials as: "Winning informationized local wars, highlighting maritime military struggle and maritime PMS [preparation for military struggle] in which integrated combat forces will be employed to prevail in system-vs-system operations featuring information dominance, precision strikes and joint operations"<sup>100</sup>. Definition is encumbered with strategic concepts without particular technologies being promoted, but the deliberation is obvious to equip PLA with all of the necessary skills for warfare in the post-Cold war conditions. Another operational imperative is strongly connected to emerging great powers and it is phenomena of asymmetry emanated in Chinese practice as integrated strategic deterrence or cross-domain deterrence where warfare in various domains under the joint command is conducted in order to confront an adversary that has clear advantage in some or all of the particular domains<sup>101</sup>.

### ***3.2 Position of Nuclear Weapons within the PLA***

Even the brief history of Chinese nuclear weapons, its emergence, development, and significance would require a whole volume. Without an aspiration to tackle it comprehensively, this chapter will elucidate the circumstances under which nuclear weapons became a strategic choice for PLA. Namely, the initial stage of thinking under the auspices of Mao Zedong was marked by indifference and irony with the overarching attitude that those weapons are paper tigers, empty threats or means of blackmail without even the smallest possibility to be used. After realizing that unprecedented destructive potential exists, indifference was substituted by underestimation and strategic assessment based on three factors: geographical characteristics of China (vast landmass, dispersed population); primitive technology behind nuclear weapons (liquid-fueled rockets with huge CEP); extended deterrence umbrella at the time coming from

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<sup>100</sup> *China, State Council, Science of Military Strategy* (Beijing: Information Office of the State Council of the People's Republic of China, 2013). The source is unofficial translation obtained by the author.

<sup>101</sup> Heath, et.al. 35-38.

nuclear ally USSR<sup>102</sup>. However, historical developments will push Chinese leadership towards generating its own nuclear arsenal. Both during the Korean War in 1950-53 and the First Taiwan Strait crisis in 1954-55, China was under the threat of nuclear attack and that subtle kind of blackmail forced Mao to update his thinking and go forward with certain development programs<sup>103</sup>. Aside from the generous help of the USSR which came in forms of know-how, expertise, technological solutions, but also weapons, China demonstrated will to create all of the necessary preconditions for the completely autonomous production in the near future. Having said that, "five plants and three mines" was the plan of building sufficient stockpile of fissile materials which are critical for nuclear weapons production<sup>104</sup>. Two years before the first official strategic document reached public in 1958, Mao put in motion the plan called "Nuclear Missile and Satellite Project"<sup>105</sup> indicating that procurement of nuclear weapons will occur on multiple structural levels, not just the very delivery systems<sup>106</sup>.

Already in 1958, the first weapons series to be produced was "Dong Feng" (DF), meaning East Wind in the Chinese language. This designation will persist to the present day comprising every land-based Chinese ballistic missile from short to intercontinental range, with the most recent addition being supersonic cruise missile. For the first period of development, two issues were not pertinent to other existing nuclear arsenals. First, instead of starting with short-range missiles, China invested all the energy on longer-range through the so-called "banian sidan" plan, 15 years long prospective effort to produce fully functional ICBM. As Lewis and Di put it: "The plan stipulated that a 4,000km long-range missile (the DF-4, intended to strike the B-52 base on the U.S. island of Guam) and a 12,000km ICBM (the DF-5, projected to cover the continental United States from northern China) could be built by 1970 and 1972, respectively"<sup>107</sup>. Second,

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<sup>102</sup> Nicola Horsburgh, *China and Global Nuclear Order: From Estrangement to Active Engagement* (Oxford: Oxford University Press, 2015) 40-41.

<sup>103</sup> Zhang 6. A prominent Chinese academic Yang Guoliang assesses it in a more comprehensive manner: "The purposes for which we developed our few strategic nuclear weapons were to break the nuclear monopoly, to eliminate the threat of nuclear blackmail, to reduce the possibility of a nuclear attack against China, and to gain a peaceful environment for economic construction." As quoted in: Zhang Jiajun and Sun Jinhan, "Liaowang," *Outlook* 29, 1997: 7.

<sup>104</sup> All the factories and their production line enlisted in: Zhang 1.

<sup>105</sup> Horsburgh 43.

<sup>106</sup> J. Mohan Malik, "Chinese Debate on Military Strategy: Trends and Portents," *Journal of Northeast Asian Studies* 9(2), 1990: 4.

<sup>107</sup> John Wilson Lewis and Hua Di, "China's Ballistic Missile Programs: Technologies, Strategies, Goals," *International Security* 17(2), 1992: 17

although the DF program was the first to be initiated, "Ju Lang" (JL) sea-based missiles were first to reach full operational capability. Unlike the other nuclear countries that fielded land-based missiles and afterward adapted them for maritime use, China started with JL-1 intermediate-range and transferred it to land under the designation DF-21 which will stay the benchmark of the arsenal for decades to come. This strategic gesture was known as "JL goes ashore", while more modern missiles will return to the regular path through the "DF goes to sea" when DF-31 was designed to become JL-2<sup>108</sup>. It is important to note that despite the fast-paced growth of Chinese nuclear technology, it was at the time far behind the state of art achieved by the US and USSR who were pioneers in the field and as such, without their help, it was all but impossible to overcome certain structural obstacles. Chinese policy of choosing the third side in bipolar order did not contribute to the modernization of nuclear weapons, especially after deterioration of the relations and severe skirmishes with the USSR at the end of 1960s culminating with Zhengbao island incidents where nuclear escalation was one of the prominently used words in interstate communication<sup>109</sup>.

Over the time, Chinese leadership mobilized more and more resources to modernize its nuclear arsenal and such efforts were described as: "China's nuclear program, moving from first-generation, silo-based, liquid-fueled, single-warhead missiles to an arsenal increasingly featuring road-mobile, solid-fueled missiles, some capable of carrying multiple warheads. China has also begun to develop and deploy a ballistic missile submarine (SSBN) force..."<sup>110</sup> Modernization plans were following the proclaimed path of China that will be later analyzed where the primary role of nuclear weapons is defensive. With the transfer of leadership from expansionist Mao to conflict-free Deng, the average range of ballistic missiles was gradually decreasing with the clear deliberation to focus on regional contingencies rather than attempt to catch up with the global arms race<sup>111</sup>. Therefore, nuclear arsenal in 1996, was looking quite different from ideals of Maoist China and it included:

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<sup>108</sup> Lewis and Di 29.

<sup>109</sup> For the overview of Sino-Soviet border dispute look at: Yang Kuisong, "The Sino-Soviet Border Clash of 1969: From Zhenbao Island to Sino-American Rapprochement," *Cold War History* 1(1), 2000.

<sup>110</sup> David C. Logan, "PLA Reforms and China's Nuclear Forces," *Joint Force Quarterly* 83(4), 2016: 58.

<sup>111</sup> For the overall character of trends of the era look at: Anthony H. Cordesman, *The PLA Rocket Force: Evolving Beyond the Second Artillery Corps (SAC) and Nuclear Dimension* (Washington: CSIS, 2016) 3-9.

half-dozen intercontinental ballistic missiles (ICBMs) capable of reaching the 48 contiguous states, perhaps a dozen shorter-range ICBMs capable of reaching Europe or Alaska, and about 70 IRBMs (with a range of 3,000–5,000 km) and medium-range ballistic missiles (MRBMs, with a range of 1,000–3,000 km) capable only of reaching targets in Asia<sup>112</sup>.

When it comes to real capabilities, not just nominal, longer-range Chinese missiles were quite inefficient to their ends. It will not be before Xi Jinping and his unmatched PLA reforms that nuclear weapons are treated with due respect and its modernization is leading to more meaningful strategic utilization.

Although some authors argue that the 1980s were crucial for the development of nuclear weapons in China<sup>113</sup>, those years made a foundation for an exegesis of previously relevant strategic documents. From a strictly hard-line approach to the development and use of nuclear-armed missiles, China started fielding conventionally armed capabilities, knowing that dual-use technology can be of great importance<sup>114</sup>. Aside from the introduction of dual-use technologies, there are numerous instruments of the current missile force modernization program, ranging from the complete transition from obsolete liquid-fueled missiles all the way to the increase of efficiency of penetration aids to counter ballistic missile defense systems<sup>115</sup>.

Wider aspect of existence and functioning of recently created PLARF is based on its technological advancements, but also on the broad strategic role embodied in core missions. In the words of Xi Jinping: "The PLARF needs to 'possess both nuclear and conventional [capabilities]' and be prepared to conduct 'comprehensive deterrence and warfighting' operations"<sup>116</sup>. Obviously, we can see two main pillars of PLARF, one of them being preventive and not-escalatory, tightly connected to the notion of deterrence (although Chinese strategists do not use this term as it is understood elsewhere) and other being counterattack force in case

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<sup>112</sup> Eric Heginbotham, et.al., *The US – China Military Scorecard* (Santa Monica, CA: RAND Corp., 2015) 27.

<sup>113</sup> "China's most impressive achievements--full-range ICBMs, acquisition of an MIRV capability and sea-based deterrent including SLBMs, tactical nuclear weapons, and dual-use space technology--were all made in the 1980s." Mohan Malik: 9

<sup>114</sup> 89, Following the changes in the nature of modern warfare, "the CMC ordered the PLARF to operate according to the concept of "Dual Deterrence and Dual Operations." Cordesman 5.

<sup>115</sup> Hua 65. Comprehensive overview of modernization methods can be found in: Gill and Ni 1-2

<sup>116</sup> As quoted in: Gill and Ni 6.



deterrence role is substituted with the need to defend the country<sup>117</sup>. That PLARF is paramount to the current grand strategy shows a way how China is trying to promote its achievements in order to add credibility to the already existing deterrent potential. Some of the moves are frequent military parades, state-owned media reports, even advertising on the Western social media and other platforms<sup>118</sup>. Strategic consequence of such a behavior is often harmful confusion and relative overestimation of the qualitative aspects of nuclear arsenal. However, it is beyond a doubt that "the PLARF's missile systems, coupled with the PLA's rapidly developing space and counter-space platforms, have become critical components of China's emerging power projection capabilities"<sup>119</sup>. Xi Jinping, more than any of his predecessors engages in the realpolitik of international relations. That can be best seen through the thinking about the future of PLARF where long term ideals are just a pinnacle of perpetuation of feasible short term goals. Precisely the modernization efforts and scientific innovations are the cornerstone of strategy around nuclear weapons<sup>120</sup>. Namely, enhancing security, effectiveness, and reliability of nuclear arsenal means strengthening its operational use<sup>121</sup>. Realistic thinking which involves asymmetry through assessment of relative capabilities promoted PLARF into the most vibrant military structure in control of nuclear armament. As US officials put it: "China continues to have the most active and diverse ballistic missile development program in the world"<sup>122</sup>. Although many experts consider Western assessments as worst-case scenario writing, it is obvious that the largest nuclear arsenals are subjects to certain modernization efforts, while China has been developing its weapon systems to the present day. This claim is augmented if we include some of the cutting edge technologies such as hypersonic glide vehicles (HGV) and missile-armed unmanned aerial vehicles (UAV) where China has achieved primacy. Focusing narrowly on

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<sup>117</sup> "Key functions of China's nuclear missile force include serving as an important element of military deterrence, a strong shield for protecting national security, an effective means to deter the outbreak of war, and an important factor in containing the escalation of war." Xijun Zhao, ed., *Intimidation Warfare: A Comprehensive Discussion of Missile Deterrence* (Beijing: National Defense University Press, 2005) 29-32.

<sup>118</sup> Michael S. Chase, *Testimony presented before the U.S.-China Economic and Security Review Commission, PLA Rocket Force Modernization and China's Military Reforms* (Washington: USCESRC, 2018).

<sup>119</sup> Cordesman 3.

<sup>120</sup> "The technological dimension of China's strategic programs traditionally has outweighed their military dimensions." Dallas Boyd, *Advanced Technology Acquisition Strategies of the People's Republic of China* (Reston, VA: Science Applications International Corp., 2010) 86.

<sup>121</sup> *China, State Council, China's Military Strategy* (Beijing: Information Office of the State Council of the People's Republic of China, 2015).

<sup>122</sup> *United States, US Air Force, National Air and Space Intelligence Center, Ballistic and Cruise Missile Threat* (Springfield, OH: National Air and Space Intelligence Center, 2017) 3.

nuclear arsenal, Gill and Ni said: "China's nuclear deterrent today is more credible than any time in history with the deployment of new or upgraded missile capabilities and platforms, including intermediate-range ballistic missiles (IRBM), intercontinental ballistic missiles (ICBMs), nuclear ballistic missile submarines (SSBNs), strategic bombers, and a variety of missile-related technologies"<sup>123</sup>. With the strategic orientation towards the modern forms of warfare, network-centric or informationized, utilizing emerging domains, a steep rise of Chinese nuclear weapons capabilities under the auspices of PLARF, has definitely been one of a kind, although burdened with severe limitations, particularly when compared to the largest members of the elite nuclear club.

### ***3.3 Technological Overview of the Chinese Nuclear Rise***

Every nuclear country in the world has been engaged in the process of acquiring technology and operational capabilities to develop nuclear triad. In other words, the elite nuclear club is open to those who have nuclearized every military branch, including army, navy and air force. Specific technologies that are considered to be part of the nuclear triad are land-based intercontinental ballistic missile (ICBM), sea-based submarine-launched ballistic missile (SLBM) including nuclear-powered submarine (SSBN), long-range strategic bomber including air-launched ballistic missile (ALBM). USA and Russia have acquired nuclear triad during the Cold war where it was the foundation of second-strike capability and consequently doctrine of mutual assured destruction. France had a nuclear triad as well but decided to disband land and air-based arms in order to keep just sea-based deterrent capabilities. The situation with China is much trickier. While it certainly has credible ICBM force, nuclear-powered submarines are still heading towards its full operability and strategic bombers are inherited from the former Soviet Union with indigenous stealth aircraft waiting to be introduced. Despite all of that, we can claim that China has an emerging or ascent nuclear triad<sup>124</sup>. This chapter will continue with a detailed

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<sup>123</sup> Gill and Ni 8.

<sup>124</sup> Gill and Ni 9. Comparison of the strong and weak points of existing nuclear triads can be found in: China Power Team, "How is China Modernizing its Nuclear Forces?" *China Power*, 10 Dec. 2019, 16 Mar. 2020, <https://chinapower.csis.org/china-nuclear-weapons/>. DIA published an assessment claiming that not until PLAAF procures indigenous strategic bomber will China have had nuclear triad: *United States, Defense Intelligence Agency, China Military Power: Modernizing a Force to Fight and Win* (Washington: DIA, 2019) 37.

analysis of all the nuclear and dual-use weapons China has at its disposal. Both past and current conditions, including modernization plans, will be considered. There are seven particular weapons systems: land-based nuclear weapons; sea-based nuclear weapons; air-based nuclear weapons; hypersonic weapons; space weapons; cruise missiles; ballistic missile defense.

### **3.3.1 Land-based nuclear weapons**

As was previously mentioned, Maoist thinking on nuclear weapons conditioned the development of the earliest models to be focused almost exclusively on ICBMs and missiles with limited intercontinental range. The first missiles to be produced were based on the Russian R series and included primitive radio inertial guidance prone to jamming and extremely large CEP. Those missiles were DF-3, DF-4 and the only one functioning today DF-5 with the longest range<sup>125</sup>. The first line of DF missiles was liquid-fueled with questionable potential for use in real war operations because of the impossibility to cover them, thereby significantly reducing survivability. As such, they did not represent credible deterrent force and Chinese leadership asked for modernization where four ways to do so will remain active even today: introducing new missile series, enhancing mobility and survivability, developing penetrative aids, MIRVing existing missiles<sup>126</sup>. All of those modernization efforts were incorporated into the second series of DF missiles developed during the late Mao period and his successors. Namely, missile ranges were diversified introducing new models and putting stress on regional deterrence missions of shorter range. Mobility was increased by creating TELs and rails while hiding missiles deep underground as well as putting them in hardened silos made survivability prospects much better. Penetrative aids came as a consequence of developing MIRV technology and were incorporated in every longer-range missile with the aim of helping the real warheads to pass through the various BMD systems. Finally, instead of producing completely new platforms, some of the older missiles (for example DF-5) were MIRVed and fueled by liquid propellant. Pinnacle of

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<sup>125</sup> Lewis and Di 17.

<sup>126</sup> Gill and Ni 6.

such a development orientation were medium, intermediate and intercontinental range DF-21, DF-26 and DF-31 missiles, respectively<sup>127</sup>.

Interesting nicknames were assigned to some models of those missiles in part because of their characteristics, but also strategic tasks. DF-21D has label "Carrier Killer" and is designed to hit precisely aircraft carriers surrounding China as a part of the wider A2/AD strategy<sup>128</sup>. As a very important part of Chinese arsenal (although predominantly armed with kinetic or conventional warheads), it will be analyzed separately in the section on ASBM. After that DF-26 is said to be "Guam Killer"<sup>129</sup> because its range is just enough to hit that US territory and represents the first completely credible threat to any of the US ground assets. DF-31A has been used as an operational basis for the ASAT test in 2007 and because of that purpose it was given the unofficial nickname "Satellite Killer". It is the first ICBM produced after the DF-5, but its range has been insufficient to hit the continental US and that is why some of the experts claim that it has limited intercontinental range<sup>130</sup>. To elucidate general trends of development within PLARF, it is important to say that DF-31 "has taken over much of the regional targeting (of Russia, India, and Guam) previously done by the DF-4, which we estimate will be retired soon"<sup>131</sup>. For decades those missile series were the spearhead of Chinese strategic missile forces, but once again the character of warfare required modernization efforts. Liquid-fueled missiles were declared by obsolete but kept in service to boost the number of warheads and accordingly to increase retaliatory capability<sup>132</sup>. However, changing propellant and MIRVing existing missiles were not methods sufficient to satisfy the PLA's needs. Overall strategic posture was dictating procurement of a modern ICBM and it was met with the introduction of DF-41 containing

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<sup>127</sup> Hans M. Kristensen and Matt Korda, "Chinese Nuclear Forces, 2019," *Bulletin of the Atomic Scientists* 75(4), 2019: 173.

<sup>128</sup> James Samuel Johnson, "China's "Guam Express" and "Carrier Killers": The anti-ship asymmetric challenge to the U.S. in the Western Pacific," *Comparative Strategy* 36(4), 2017: 319-332.

<sup>129</sup> Missile Defense Project, "DF-26 (Dong Feng-26)," *Missile Threat, Center for Strategic and International Studies*, 18 Jan 2018, 16 Mar 2020, <https://missilethreat.csis.org/missile/dong-feng-26-df-26/>.

<sup>130</sup> Missile Defense Project, "DF-31 (Dong Feng-31 / CSS-10)," *Missile Threat, Center for Strategic and International Studies*, 12 Aug 2016, 16 Mar 2020, <https://missilethreat.csis.org/missile/df-31/>. "The DF-31 has a range of about 7,200 km, but cannot reach the continental United States from its deployment areas in China." Kristensen and Korda 174.

<sup>131</sup> Kristensen and Korda 174.

<sup>132</sup> Bill Gertz, "China Successfully Tests Hypersonic Missile," *The Washington Free Beacon*, 27 Apr. 2016, 16 Mar. 2020, <https://freebeacon.com/national-security/china-successfully-tests-hypersonic-missile/>.

cutting edge technology, surprisingly displayed for the first time at the voluminous military parade in 2019.

Gill and Ni claim that DF-41 is competent when compared to the foreign counterparts, US LGM-30G Minuteman-III and Russian Topol-M<sup>133</sup>. There are even more optimistic analyzes: "DF-41 incorporates some cutting-edge technologies, such as the latest information-processing measures, noting that it performed better than its foreign counterparts in some key aspects for ballistic missiles"<sup>134</sup>. It goes without saying that DF-41 is liquid-propelled with more precise information about the content missing, as well as a lot of other technical details that are left on imagination and evidence-based analyzes of experts. DF-41 is currently the operational missile with the longest range, predicted to be between 12000-15000 kilometers<sup>135</sup>, but also possible to be used on a shorter-range to increase explosive power. The only known missile to be projected on longer-range is Russian R-36 Satan, as a part of Putin's famous revelation of six advanced weapon systems<sup>136</sup>. Aside from range which is in itself an enormous advantage, DF-41 can be based in silo or road-mobile. If it is mobile, then a special Taian vehicle is used to enable cross-country mobility on various terrains<sup>137</sup>. Certainly, because of its 21-meter length and 80 tons of weight, mobility of the missile is significantly lowered, but the vastness of Chinese territory can provide some useful places to hide it, including mountainous regions and underground caverns. According to the reports, it can have up to 10 warheads, although some of them will certainly be equipped with dummy warheads and penetration aids. For such a missile, an early operational CEP of just 100 meters is an astonishing achievement<sup>138</sup>.

Going further from technical characteristics, the timing of the release of DF-41 and propaganda surrounding it corresponds to the time of heightened tensions with the USA under the shadow of a trade war and permanent East China Sea low to moderate conflicts. Therefore, in Chinese media reports, it was constantly repeated that DF-41 can hit every target in the continental US in

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<sup>133</sup> Gill and Ni 6.

<sup>134</sup> Zhao Lei, "China's Strategic Deterrents on Display," *China Daily*, 2 Oct. 2019, 16 Mar. 2020, [https://www.chinadaily.com.cn/a/201910/02/WS5d93e15aa310cf3e3556e8f6\\_2.html](https://www.chinadaily.com.cn/a/201910/02/WS5d93e15aa310cf3e3556e8f6_2.html).

<sup>135</sup> China Power Team, How is. Gertz, China Successfully.

<sup>136</sup> BBC, "Russia's Putin Unveils 'Invincible' Nuclear Weapons", *BBC*, 1 Mar. 2018, 16 Mar. 2020, <https://www.bbc.com/news/world-europe-43239331>.

<sup>137</sup> Military Today, "DF-41 Intercontinental ballistic missile", *Military Today*, 16 Mar. 2020, [http://www.military-today.com/missiles/df\\_41.htm](http://www.military-today.com/missiles/df_41.htm).

<sup>138</sup> Lei, China's.

just 30 minutes, producing an imminent response from the West claiming that existing BMD systems are sufficient to protect the mainland from preemptive strike involving ICBMs<sup>139</sup>. While more details about the missile are still undisclosed, it is without a doubt the present and future of PLARF, both for deterrence and warfighting missions.

Previously mentioned anti-ship weapons, cruise missiles, ASAT and BMD although in majority ground-based will be analyzed separately because of its distinctive technical characteristics and strategic use.

### 3.3.2 Sea-based nuclear weapons

Traditionally considered to be the most efficient model to achieve assured retaliation, sea-based nuclear weapon systems are the most expensive and complex to procure in part because of specific terrain where it is functioning, but not less because of the delivery system embodied in nuclear-powered submarines (SSBN). It is a fact that China in the first decades of its nuclear program did not have sufficient scientific expertise to build sea-based nuclear weapons. However, drawing upon obsolete Russian technology, China built Xia SSBN (Type-092) which was armed with Julong-1, medium-range ballistic missile<sup>140</sup>. This submarine was known for being one of the loudest ever made, therefore unable to avoid adversarial radars. Since it was not suitable neither for deterrent missions in the blue waters nor for nuclear counterattack, it was substituted with other vessels, including Type-094 Jin-class SSBN, Shang class Type-093 nuclear attack submarine (SSN), Song-class Type-039G SSN<sup>141</sup>. Type 094 SSBN is armed with JL-2 missile with the overall range of about 7000 kilometers. Worst-case scenarios claimed that

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<sup>139</sup> Gertz, China Successfully. For more detailed operational aspects look at: Tsuyoshi Minami, "Do China's New Missiles Change the Game?" *East Asia Forum*, 29 Feb. 2020, 16 Mar. 2020, <https://www.eastasiaforum.org/2020/02/29/do-chinas-new-missiles-change-the-game/>

<sup>140</sup> China Power Team, "Does China Have an Effective Sea-based Nuclear Deterrent?" *China Power*, 28 Dec. 2015, 16 Mar. 2020, <https://chinapower.csis.org/ssbn/>.

<sup>141</sup> Kartik Bommakanti and Ameya Kelkar "China's Military Modernisation: Recent Trends," *ORF Issue Brief 286*, 2019: 4.

it can kill 12 million Americans<sup>142</sup>, while realistic analyzes showed that it is significantly below the quality level of foreign counterparts:

Although the JL-2 gives China a credible sea-based nuclear deterrent, it is less capable than the SLBMs of Russia and the US.<sup>4</sup> Russia's SS-N-23 Skiff, for instance, has a similar range as the JL-2, but carries four MIRVed warheads. The US Trident II D-5 is even more capable. It features a range of 12,000 km and can deliver a volley of eight MIRVed warheads<sup>143</sup>.

Nevertheless, the intelligence community assessed the Yin-class submarine as the first credible Chinese sea-based nuclear deterrent<sup>144</sup>. The fact of a relatively limited range of JL-2 together with its single warhead design is a witness to the regional claims of Chinese leadership, leaving global reach out of the game. That motivated some authors to label it "bastion of South China Sea"<sup>145</sup> where multiple SSNs protect much more expensive and valuable SSBNs. Even this was not the end of PLA in the procurement of top-level sea-based weapon systems. In doing so, they need to overcome three major problems in order to enhance survivability.

First, operational stealth is to be achieved through the development of quieting technology so that detection of enemy tracking systems can be avoided and deeper penetration into the oceans ensured. Second, SLBM must have intercontinental range which would enable SSBN to stay much closer to the Chinese mainland, still being able to hit every desired target. Third, command, control, and communication (C3) system has to be upgraded in order to avoid chain of command issues and inadvertent nuclear escalation<sup>146</sup>. Some of those requirements were already met since PLA fielded SSBN armed with a modern SLBM. When it comes to C3, primitive radio communications were substituted with fully functional extremely low frequency (ELF) radio waves that can penetrate water on the depth of a few kilometers<sup>147</sup>.

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<sup>142</sup> Mark Schneider, "Minimum Deterrence and Russian and Chinese Threat Developments", *Comparative Strategy* 33(3), 2014: 199.

<sup>143</sup> China Power Team, How is.

<sup>144</sup> *United States, Department of Defense, China Military Power Report* (Washington: DoD, 2017) 24.

<sup>145</sup> China Power Team, Does China.

<sup>146</sup> China Power Team, Does China.

<sup>147</sup> Joseph Trevithick, "China's NYC-Sized 'Earthquake Warning System' Array Sounds More Like A Way to Talk To Submarines." *The Drive*, 31 Dec. 2018, 16 Mar. 2020, <https://www.thedrive.com/the-war-zone/25728/chinas-new-york-city-sized-earthquake-warning-system-sounds-more-like-way-to-talk-to-subs>.

The new SSBN currently in the production phase is Tang class Type 096, third-generation nuclear submarine somewhat similar in design to the current functional US Ohio-class. With not many details publicly available, Type 096 will be able to carry 16-24 SLBMs with penetration aids and communication jammers<sup>148</sup>. Aside from the new submarine as a delivery vehicle, the most significant modernization effort in this sense is the new SLBM, JL-3, comparable to the US Trident and Russian RSM-56 Bulava. Probably it is a maritime pair of DF-41, judging by the recent tendencies in nuclear weapons production and the fact that it contains solid fuel<sup>149</sup>. Having a range of over 9000 kilometers provides a comfortable force to the Chinese navy to pair it even with the less functional Type 094 SSBNs, which was the actual basis for the first flight test. It was conducted in 2018 in the Bohai Sea demonstrating a successful cold ejection<sup>150</sup>. It is claimed that JL-3 has the possibility to implement MIRV technology of up to three warheads per missile guaranteeing very low CEP<sup>151</sup>. Finally, unconfirmed reports say that China does not want to reveal much of the information about this missile because it incorporates innovative concept of mounting hypersonic glide vehicle (HGV) to the SLBM. If that will be confirmed, China will have by far the most advanced maritime weapon in operation because "the use of a hypersonic last stage for the test is designed to defeat anti-missile systems"<sup>152</sup>. Even without such technology, Tang class Type 096 armed with JL-3 missiles will definitely be the key to providing PLA with a necessary degree of retaliatory capacity, being furthermore critical for the stable and credible nuclear triad.

### 3.3.3 Air-based nuclear weapons

Geographical characteristics of China, the vastness of its territory and dispersion of population conditioned air-based leg of nuclear triad to be the one lagging behind the other two. There has always been a dictate to have a strategic bomber, while quality was not among the

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<sup>148</sup> Global Security, "Type 096 Ballistic Missile Submarine," *Global Security*, 16 Mar. 2020, <https://www.globalsecurity.org/wmd/world/china/type-096.htm>.

<sup>149</sup> Bill Gertz, "China Tests New Sub-Launched Strategic Missile", *The Washington Free Bacon*, 13 Jun. 2019, 16 Mar. 2020

<sup>150</sup> Shaan Shaikh, "China Flight Tests New JL-3 SLBM," *Missile Threat, Center for Strategic and International Studies*, 21 Dec. 2018, 16 Mar. 2020, <https://missilethreat.csis.org/china-flight-tests-new-jl-3-slbm/>.

<sup>151</sup> China Power Team, How is.

<sup>152</sup> Shaikh, China Flight.



most important features. As was the case with land and sea-based systems, modernization of the arsenal is needed to comply with the conditions posed by the new character of warfare. Air-based nuclear weapons need the same treatment through the introduction of new models of strategic bombers as well as fielding new air-launched ballistic missiles (ALBM). For many decades PLAAF used Russian bomber aircraft, prominently Tupolev Tu-16 Badger<sup>153</sup>. Chinese bomber with designation H-6 is a mere derivative of the Russian long-range asset. Nevertheless, that technology is considered as obsolete because air defense systems have experienced such improvements that Cold war aircraft will have little to no chances of being successful in their vital deterrent and warfighting missions. That is why the first wave of modernization of the air-based leg of the nuclear triad was refurbishing of H-6 in two ways. First, there was H-6K adjusted for carrying large (probably ASBM or ASCM) missiles. Second, H-6N was further upgraded, capable of delivering long-range missiles<sup>154</sup>.

The next wave of modernization represents complete disband of Cold war-like aircraft technology and passing to the fifth generation with incorporated stealth technology. H-20 bomber is in the production phase and reports claim its striking similarity to the US B-2 Spirit, the most successful and advanced bomber ever to hit the sky<sup>155</sup>. Its range will be around 8500 kilometers without refueling and it is expected to enter into service in 2025<sup>156</sup>. Stealth technology will finally enable the Chinese air force to conduct special missions not necessarily of escalatory nature without drawing much international attention. Finally, aside from long-range strategic bomber, there is a project of shorter-range bomber labeled as JH-XX, indicating that it is still in the experimental phase. Without much effort, it is easy to infer that Chinese scientists acquired technology from failed US projects. Namely, Lockheed Martin with FB-22 and Northrop Grumman with FB-23 in the dawn of the new millennium tried to develop regional fighter-bomber technology with the aim of deploying it in particular theater commands<sup>157</sup>. China

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<sup>153</sup> Joseph Trevithick, "New Photos Point to Chinese Bomber Being Able to Carry Huge Anti-Ship Ballistic Missiles," *The Drive*, 23 Sep. 2019, 16 Mar. 2020, <https://www.thedrive.com/the-war-zone/29975/new-photos-point-to-chinese-bomber-being-able-to-carry-huge-anti-ship-ballistic-missiles>.

<sup>154</sup> Trevithick, New Photos. *United States, Department of Defense, China Military Power Report* (Washington: DoD, 2017) 28.

<sup>155</sup> China Power Team, How is.

<sup>156</sup> Trevithick, New Photos.

<sup>157</sup> Lockheed Martin, "F-22 Raptor: Air Dominance Defined", *Lockheed Martin*, Apr. 2015, 16 Mar. 2020, <https://www.lockheedmartin.com/content/dam/lockheed-martin/aero/documents/f22/F-22-Product-Card.pdf>.

will use this technology to protect regional interests, especially in the South China Sea by arming JH-XX with an appropriate mix of precision-guided munitions (air-to-ground) and missiles (air-to-air)<sup>158</sup>. Without a doubt, all of the models and projects of indigenous Chinese aircraft are nuclear-capable as soon as state-of-art technology hits the level to be able to deliver nuclear-armed missiles to the target without consequences for the aircraft itself.

When it comes to the ALBMs, all of the missiles used are in fact land-based mounted to the aircraft. Since this is not an easy task, designations and missile series are changed to signal the distinctive efforts to develop air-based variants. As was previously mentioned H-6N bomber will carry up to six anti-ship ballistic missiles. Namely, land-based DF-21D is put on aircraft and given an official designation CH-AS-X-13 since that technology is still in phase of achieving full operational capability<sup>159</sup>. Some analysts claim that this is "giving the aircraft an impressive stand-off capability against large enemy warships, especially aircraft carriers"<sup>160</sup>. Moreover, PLARF possesses DF-26 longer-range ASBM both conventional and nuclear-armed versions capable of becoming air-launched, while short-range DF-16G is exclusively intended to serve for A2/AD tasks and is capable to carry low-power nuclear warheads, conventional warheads and cluster munitions<sup>161</sup>. H-20 bomber with long-range ballistic missiles and regional JH-XX with conventional and nuclear armament represent credible air leg of the nuclear triad.

### 3.3.4 Hypersonic weapons

When talking about cutting edge technology stemming from military modernization, hypersonic weapons have the exclusivity of being the only system not currently operational. Therefore, there exists a subtle race among the great powers on who will be the ruler and standard-setting actor in this sense. Currently, the weapons system which is nearest to the

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<sup>158</sup> Tyler Rogoway and Joseph Trevithick, "Intel Report Confirms China Developing Stealthy Tactical Bomber In Addition To Strategic Bomber," *The Drive*, 16 Jan. 2019, 16 Mar. 2020, <https://www.thedrive.com/the-war-zone/25989/intel-report-confirms-china-developing-stealthy-regional-bomber-in-addition-to-strategic-bomber>.

<sup>159</sup> Christensen and Korda 176.

<sup>160</sup> Trevithick, New Photo.

<sup>161</sup> Zhao Lei, "Xi inspects troops as China's military might on show," *China Daily*, 30 Jul. 2017, 16 Mar. 2020, [http://www.chinadaily.com.cn/interface/flipboard/158853/2017-07-30/cd\\_30295602.html](http://www.chinadaily.com.cn/interface/flipboard/158853/2017-07-30/cd_30295602.html).

introduction is Russian YU-72 Avangard, hypersonic glide vehicle (HGV)<sup>162</sup>. We should note that HGV in itself is not a weapon since it needs a platform on which to be delivered. While Russians hurried to proclaim its leadership in hypersonic technology, the US military-industrial complex is unusually silent, while China presumably has the most feasible approach of them all. Namely, its modernization started with attempts to design a brand new ballistic missile, just to come to the conclusion that HGV can be mounted to some of the already existing.

More precisely, China started developing hypersonic missiles as a next generation of DF series, designated as DF-ZF (in Western media WU-14). It was often used rocket booster with two stages where speed in descent phase was extremely fast, according to reports at Mach 10<sup>163</sup>. What PLA was aimed to achieve with this missile is pretty much obvious: "DF-ZF will have shorter flight times and be capable of performing evasive maneuvers at hypersonic speeds, which will complicate the ability of current missile defenses to intercept it"<sup>164</sup>. However, bringing the whole ballistic missile on the speeds above Mach 5 is a daunting task where the current level of scientific advancement is not enough to produce practically useful weapons. That is why China decided to opt for HGV which is mounted on top of the ballistic missile instead of a warhead. Its trajectory is ballistic until the HGV is released when non-ballistic high-speed maneuvers start to avoid adversarial defense measures<sup>165</sup>.

The missile revealed at the parade in 2019 was DF-17, which used rocket booster from DF-16B designed to bring missile to exo-atmosphere where HGV would separate from the missile and start its own return phase<sup>166</sup>. This missile as many others produced by PLA is suitable for dual-use since instead of HGV, conventional or nuclear payload can be put. However, this is the first

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<sup>162</sup> Aziz Erdogan, "DF-17: Hypersonic Glide Vehicle on the Way," *Beyond the Horizon*, 18 Oct. 2019, 16 Mar. 2020, <https://www.behorizon.org/df-17-hypersonic-glide-vehicle-on-the-way/>.

<sup>163</sup> Richard Weitz, "China and Hypersonic Weapons," *Defense Info*, 18 Jan. 2019, 16 Mar. 2020, <https://defense.info/air-power-dynamics/2019/01/china-and-hypersonic-weapons/>.

<sup>164</sup> Missile Defense Advocacy Alliance, "DF-ZF Hypersonic Glide Vehicle", *MDAA*, 16 Mar. 2020, <https://missiledefenseadvocacy.org/missile-threat-and-proliferation/missile-proliferation/china/df-zf-hypersonic-glide-vehicle/>.

<sup>165</sup> Jeffrey Lin and P.W. Singer, "Hypersonic Gliders, Scramjets, And Even Faster Things Coming to China's Military," *Popular Science*, 25 Aug. 2014, 16 Mar. 2020, <https://web.archive.org/web/20140828024458/http://www.popsci.com/blog-network/eastern-arsenal/hypersonic-gliders-scramjets-and-even-faster-things-coming-chinas>.

<sup>166</sup> Lei, China's.

hypersonic weapon to be "fielded operationally"<sup>167</sup>. Although Chinese leadership claims that DF-17 will be just a conventional weapon, recent tests showed its hypersonic capabilities which will provide PLA with much more space for asymmetric and unconventional warfare.

### 3.3.5 Space weapons

In 2007, China managed to achieve a positive test of anti-satellite weapons (ASAT) and the result was that they "destroyed one of their own aging satellites in Low Earth Orbit with a kinetic kill vehicle launched from the ground"<sup>168</sup>. After many controversies concerning uncontrollable debris, it was discovered that the weapon tested successfully was DF-21 with a mounted kinetic kill vehicle (KKV) as a replacement for conventional or nuclear tip.

China has developed an array of ASAT technologies both nuclear and non-nuclear. A range of already existing DF models can be utilized and transformed into functioning ASAT capabilities using classical ground, air and water launch<sup>169</sup>. Non-nuclear ASATs are mainly less harmful but intended to confuse adversarial strategic communications and enable various cyber-attacks<sup>170</sup>.

Currently, ground-based direct ascent weapons are the most often used because of the economic viability since the existing systems can be turned into ASATs. Regardless of the type of their warhead, they are marked by the so-called kinetic hit where the missile is directly colliding with a space object. That is why ASAT weapon systems have mounted a kinetic hit vehicle, small part on the top of the missile which separates during the terminal trajectory phase and use guidance systems to hit the target<sup>171</sup>. As Nayak et.al. noticed: "[T]hese tests have all used direct ascent

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<sup>167</sup> Ankit Panda, "Introducing the DF-17: China's Newly Tested Ballistic Missile Armed With a Hypersonic Glide Vehicle," *The Diplomat*, 28 Dec. 2017, 16 Mar. 2020, <https://webcache.googleusercontent.com/search?q=cache:g2tKDyebQOQJ:https://thediplomat.com/2017/12/introducing-the-df-17-chinas-newly-tested-ballistic-missile-armed-with-a-hypersonic-glide-vehicle/+&cd=12&hl=en&ct=clnk&gl=au&client=firefox-b-d>.

<sup>168</sup> Michael Nayak, et.al., *Changing the Deterrence Paradigm: Leveraging Space to Mitigate Nuclear Risk* (Maxwell, AL: Air University Press, 2017) 8.

<sup>169</sup> Michael Krepon and Julia Thompson, eds. *Anti-satellite Weapons, Deterrence and Sino-American Space Relations*, (Washington: The Stimson Center, 2013).

<sup>170</sup> Brian G. Chow, "Stalkers in Space: Defeating the Threat," *Strategic Studies Quarterly*, 11(2), 2017: 87

<sup>171</sup> For the detailed technical overview look at: Paul Zarchan, *Tactical and Strategic Missile Guidance*, Sixth Edition (Reston, VA: Aerospace Research Central, 2012) 60-71.

ASAT technology where the ASAT is launched from a ballistic missile to place the kill-vehicle on an intercept trajectory with the orbital target<sup>172</sup>. In the previously mentioned ASAT test of 2007, China used DF-21, a three-stage, solid-fueled, 1500 kilometers range, IRBM to hit Low Earth Orbit (LEO) satellites. This is of vital importance when discussing PLA modernization efforts since an emerging strategic domain such as space presents a window of opportunity for China as it will be elucidated in the next chapters.

### 3.3.6 Cruise and anti-ship missiles

Cruise missile as a technology essentially beyond nuclear typology but inextricably connected to it is an integral part of PLA modernization efforts. Chinese arsenal of cruise missiles is huge and it would be impractical to mention even the tiny part of theirs. It should be noted that the majority of cruise missile carries designation CJ with CJ-10 being the widely used and discussed weapons because of its penetrability and strategic purpose<sup>173</sup>. Aside from that, the last big innovation presented at the parade in 2019 was DF-100, which caused much confusion because of its name. DF would suggest that it is a ballistic missile, while the official introduction was "supersonic cruise missile"<sup>174</sup>. It is widely known that cruise missiles are subsonic, but if their range is shorter, then they can fly at Mach 3-5. DF-100 is accordingly considered to be a corollary of military regionalization as a legitimate branch of modernization. This missile is using all the most advanced concepts in cruise missile technology, composite navigation putting together inertial navigation, TERCOM and indigenous Chinese Beidou constellation<sup>175</sup>. Much more than the missile it is important to see its role as an ASCM.

A former US general said that the impact of China mastering anti-ship technology will have the same impact as when they fielded the first nuclear weapon in 1964<sup>176</sup>. That is exactly what

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<sup>172</sup> Nayak, et.al. 8.

<sup>173</sup> Christensen and Korda 39.

<sup>174</sup> James Holmes, "Is China's DF-100 Missile a Threat to the U.S. Navy?" *The National Interest*, 4 Nov. 2019, 16 Mar. 2020, <https://nationalinterest.org/blog/buzz/chinas-df-100-missile-threat-us-navy-93166>.

<sup>175</sup> Sebastien Roblin, Is China's DF-100 Missile Good Enough To Kill America's Navy?, *The National Interest*, 17 Nov. 2019, 16 Mar. 2020, <https://nationalinterest.org/blog/buzz/chinas-df-100-missile-good-enough-kill-americas-navy-96476>.

<sup>176</sup> Eric Hagt and Matthew Durnin, "China's Anti-ship Ballistic Missile: Developments and Missing Links," *Naval War College Review* 62(4), 2009: 87.

happened because China has been focused on acquiring technology that can endanger blue water navies and enable PLAN to conduct their own protection of the mainland. The majority of the missiles discussed in previous parts of this chapter have their own anti-ship variants. DF-21D, DF-26, DF-31AG, DF-16B, DF-17, DF-100 and many others can be adjusted to the purpose of hitting adversarial, primarily US aircraft carriers and other combat vessels. In the words of Chinese strategists, those missiles are "an assassin's mace for maritime asymmetric warfare able to strike targets on water"<sup>177</sup>. Two big gaps are bridged in here. First, the Chinese navy is not among the strongest points of the PLA so with the help of PLARF their tasks can be made easier. Second, finally, missiles are able to hit fast-moving target which is all but impossible with classical ballistic missiles and its fixed or slightly adjustable trajectories.

### **3.3.7 Ballistic missile defense**

The whole inventory revolving around nuclear weapons cannot be completed without taking into account ballistic missile defense (BMD). China traditionally has not been giving much attention to this, repeatedly because of geographical position, but also general defensive nuclear posture. Fluctuations in international relations cause certain changes and BMD suddenly becomes an important issue both because of its functionality and prestige. Initial BMD capabilities for China come exclusively as an import from Russia, their S-300 and S-400 systems. Surface-air missiles (SAM) acquired are among the most advanced Russia offers to foreign countries, mainly SA-20 PMU2<sup>178</sup>. It has the capability to intercept every ballistic missile within the range of 1000 kilometers.

Indigenous BMD production includes HQ-9 which is a mid-course defense, still in the production phase<sup>179</sup>. This would enable PLA to generate a dome all the way to the exo-atmosphere. It is important to note that future Chinese BMD will be completely independent since there is also developed radars production and other facilities needed for the defense to

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<sup>177</sup> Andrew Erickson, "Showtime: China Reveals Two 'Carrier-Killer' Missiles," *The National Interest*, 3 Sep. 2015, 16 Mar. 2020, <http://nationalinterest.org/feature/showtime-china-reveals-two-carrier-killer-missiles-13769>.

<sup>178</sup> Cordesman 52.

<sup>179</sup> *United States, Department of Defense, China Military Power Report* (Washington: DoD, 2017) 29.

function properly<sup>180</sup>. Some specialists even claim that Chinese BMD is a dual-use system because it can be used as an ASAT weapon to intercept missiles using space as their launch platform or reaching space in any part of their flight (eg. HGVs).

### ***3.4 Wider Nuclear Strategic Landscape***

The full display of Chinese nuclear capabilities inevitably leads us to explore how and why those systems are being used. That means investigating the strategic level, declaratory policies, and operational realities. However, the analysis here will be limited to enlisting various labels prominently given to the Chinese strategic use of nuclear weapons. Michael Chase in a somewhat ironical manner demonstrated the variety of descriptions of the Chinese strategy, always swinging between the usual pure bureaucratic language and distinct art-prone formulations: "Chinese scholars have described China's strategy as "counter nuclear coercion" (Li Bin), "a type of minimum deterrence" (Shen Dingli and Yao Yunzhu), "minimum credible deterrence" (Teng Jianqun), "defensive deterrence characterized by the policy of no-first-use" (Sun Xiangli), "first-strike uncertainty" (Wu Riqiang), and "dynamic minimum deterrence" (Chu Shulong and Rong Yu)"<sup>181</sup>. Throughout this chapter, a number of additional adjectives have been added: existential, flexible, limited, ambiguous, strategic, active, self-defensive, and network-centric. All of those are certainly full of meaning and purpose of this part is definitely not to explain them, since the concepts are pretty well known, but to pinpoint the most significant and realistic strategies in order to be able to gradually start deconstructing the layers of Chinese nuclear thinking. On the proposed pathway, it is a wise idea to start with a formulation given by the Ministry of Defense of PRC: "China has always pursued the policy of no first use of nuclear weapons and adhered to a self-defensive nuclear strategy that is defensive in nature. China will unconditionally not use or threaten to use nuclear weapons against non-nuclear weapon states or in nuclear-weapon-free zones, and will never enter into a nuclear arms race with any other country. China has always "kept its nuclear capabilities at the minimum level required for

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<sup>180</sup> *United States, Department of Defense, China Military Power Report* (Washington: DoD, 2017) 49.

<sup>181</sup> Michael S. Chase, "China's Transition to a More Credible Nuclear Deterrent: Implications and Challenges for the United States" *Asia Policy* 16(1), 2013: 69–101.

maintaining its national security"<sup>182</sup>. Here we can notice some of the basic postulates of the so-called Chinese nuclear posture. Those are defensive strategy, no-first-use (NFU) policy and indirectly described minimum deterrence.

A defensive nuclear strategy is a bluntly intuitive notion. Namely, it foresees that nuclear weapons under no circumstances will be used as a means of attack or assertive military operations, but always to protect its territory and defend interests from an imminent or similar intensity threat. However, as it soon will become obvious, the situation with China is never completely intelligible. Since the Maoist era, the concept of active defense has been developing<sup>183</sup>. In shortest, it can be defined as a set of practices which are defensive on strategic, but offensive on tactical (operational) level. The character of threat does not necessarily need to be military. Active defense considers economic, diplomatic or other soft challenges as a legitimate justification to launch a tactical attack since the threat already exists<sup>184</sup>. We can claim the striking similarity with the US concept of preemptive strike, especially after the terrorist incidents at the dawn of the new millennium. Although China has never used nuclear weapons, from time to time it can be pinpointed as one of the options to create a solution for the potential regional escalation. That led some authors to claim that active defense is "extending to disputed sovereignty claims"<sup>185</sup>. When it comes to the low-level conflict in the South and East China seas, the active defense has evolved into a more modern concept of anti-access, area-denial (A2/AD) or anti-intervention<sup>186</sup>. Since near abroad is almost as important to China as its mainland, it is not a miracle that they employed all of the strategic resources to create an absolutely safe environment where China will be the only major actor in control of regional dynamics and contingencies. This included modernized active defense where essentially assertive actions are never formulated as such on the strategic level. A2/AD "calls for particular weapons which allow China to impede, restrict, or deter enemy movements in the area it wishes to exert control

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<sup>182</sup> *China, State Council, China's Military Strategy* (Beijing: Information Office of the State Council of the People's Republic of China, 2015).

<sup>183</sup> For the detailed overview of changing nature of active defense concept, being conventional and connected to people's war during Mao's reign and currently completely nuclear, aimed primarily at the regional interaction, look at: Stacy A. Pedrozo, *Testimony presented before the U.S.- China Economic and Security Review Commission, China's Active Defense Strategy and its Regional Impact* (Washington: USCESRC, 2010) 1-12

<sup>184</sup> Heath, et.al. 45

<sup>185</sup> Heath, et.al. 35

<sup>186</sup> For a detailed debate look at: Roger Cliff, et.al., *Entering the Dragon's Lair: Chinese Anti-access Strategies and Their Implications for the United States* (Santa Monica, CA: RAND Corp., 2007), especially pages 1-12.



over"<sup>187</sup>. Nuclear weapons are the pinnacle of the strategy which complies perfectly with the trend of regionalization mentioned in the previous subchapter. Two are the main aims of this strategy: first, to negate sovereignty claims in disputed territories by the neighboring countries; second, to discourage US military from further engagement in the region, especially if China-Taiwan long-lasting conflict experience escalatory tendencies. The most famous operational concept of A2/AD is the assassin's mace, emphasizing new forms of warfare but keeping the traditional Chinese strategic vision<sup>188</sup>. After all, defensive nuclear posture remains the most credible used by Chinese strategists. Others are prone to sudden shifts or wrong interpretations where much of the material for the dubious intentions of China can be traced back.

NFU policy is a part of defensive nuclear posture but draws significant attention because of its structural inconsistencies. For the difference from launch-on-warning, NFU provides the space for retaliation just when a nuclear attack is imminent and adversarial weapons are launched. There is no reasonable doubt or inadvertent escalation, nuclear capabilities are limited to the retaliatory role. In an ideal scenario, NFU would be a guarantee of the rational use of nuclear weapons. The case of China or the reasons that pushed leadership towards such a policy may suggest a slightly more cautious approach. Heath et al. claim that "NFU policy came under pressure as a result of changes in military technology and threats to Chinese national interests"<sup>189</sup>. If there is no superior power which makes an actor willing to commit itself to defense, then there certainly is a set of insufficiencies and major setbacks hidden under the veils of passivity. This was true especially in the first decades of Chinese nuclear arsenal where NFU policy was compatible with "poor accuracy, protracted launch schedules and a relaxed alert posture"<sup>190</sup>. As technology improves and nuclear arsenal modernizes, ambitions are evolving too. That is why the Chinese strategy in the new millennium often emphasizes that the key to

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<sup>187</sup> Garcia, China's 49. Heginbotham, et.al., enlist those strategically important weapons: "[A] large number of highly accurate ballistic missiles, high quality anti-ship cruise missiles, submarines, sophisticated long-range air defense systems, and counter-C4ISR (command, control, communication, computer, intelligence, surveillance, and reconnaissance) capabilities, including counter space, electronic warfare, cyber warfare, and anti-radiation systems." Heginbotham, et.al. 4.

<sup>188</sup> Bruzdinski develops correlation between the assassin's mace concept and inferior-superior stratagem considered to be a Chinese indigenous primitive type of asymmetric warfare: Jason Bruzdinski, "Demystifying Shashoujian: China's 'Assassin's Mace' Concept," *Civil-Military Change in China: Elites, Institutes and Ideas After the 16th Party Congress*, eds. Andrew Scobell and Larry Wortzell (Carlisle, PA: Strategic Studies Institute, 2004).

<sup>189</sup> Heath, et.al. 49.

<sup>190</sup> Bommakanti and Kelkar 6.

ensuring effective nuclear posture is to maintain a certain level of ambiguity or to prevent an adversary from basing his actions on the predictable NFU premises<sup>191</sup>. Ambiguous nuclear posture obviously leaves certain consequences, particularly when it comes to the perceptions of other nuclear countries. Lanoszka and Sherer in their theory of ambiguous first use (AFU) claim that it is, in the end, pertinent to the asymmetric relations and better suited for crisis management than peaceful strategic use<sup>192</sup>. The last concept related to the NFU are conditions that can be put on its implementation to conduct the mission of lowering the nuclear threshold<sup>193</sup>. It is ideal to confront both conventional threats of powerful adversary and coercion attempts of small powers because the set of response measures is significantly narrowed when such an indefinite and unclear threat is posed. Of course, if the bar is put too low it would be considered as an escalatory act and China would be confronted with the harsh international response.

The third and last strategic cluster revolves around deterrence as the principal mission of nuclear forces. The existing nuclear capabilities are oriented towards intimidation or retaliation of any adversary, including terrorists and non-state actors. It is important to note that the Chinese notion of deterrence (*weishe*) is radically different than the Western one because their deterrence is considered as a derogatory term, while the better translation would be persuasion<sup>194</sup>. For the sake of the world economy, we will call it deterrence. Chinese overall nuclear posture in accordance with other elements has been that of minimum deterrence. In strategic terms, it is called a lean and effective nuclear arsenal<sup>195</sup>. In other words, it is the minimal number of nuclear assets that can ensure a credible retaliatory strike. In contrast, many authors precisely this Chinese quest for assured retaliation read as a potential transition towards more aggressive nuclear posture:

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<sup>191</sup> One of the versions of the official doctrinal document *Science of Military Strategy* states: "China must maintain an appropriate degree of ambiguity in its nuclear deterrence posture so as to increase uncertainty for its enemy, thus enhancing the deterrent effectiveness of China's limited nuclear forces." *China, State Council, Science of Military Strategy* (Beijing: Information Office of the State Council of the People's Republic of China, 2013). The source is unofficial translation obtained by the author.

<sup>192</sup> Alexander Lanoszka and Thomas Leo Scherer, "Nuclear ambiguity, no-first-use, and crisis stability in asymmetric crises," *The Nonproliferation Review* 24(3-4), 2017: 343-355.

<sup>193</sup> Heath, et.al. 47.

<sup>194</sup> Whether this is a pure rethorical figure or it has real content, look at: Gill and Ni 6-8.

<sup>195</sup> About comprehensive historical context of appearance of lean and effective character of Chinese nuclear arsenal look at: Olav Njølstad, *Nuclear Proliferation and International Order: Challenges to the Non-Proliferation Treaty* (London: Routledge, 2011) 144-160.

[T]he acquisition of a credible and survivable second-strike capability combined with more accurate and sophisticated strategic and tactical nuclear weapons of various kinds certainly provides new strategic, operational, and tactical options similar to counter-value nuclear war-fighting doctrines<sup>196</sup>.

War-fighting is certainly contrary to the deterrence concept, but again it is its escalatory counterpart. If deterrence fails, China will involve in war-fighting. A much more common approach is nuclear counter-attack grounded in the revenge logic of deterrence<sup>197</sup>. Some authors even claim that this is essentially a myth because counter-attack in the nuclear world is not retaliation but a completely new attack, potentially considered as the first strike<sup>198</sup>.

Minimum deterrence is a very hard concept to determine because permanent calculations would lead to absolute zero, which is a paradox in itself. That is why better posture would be called limited deterrence with a proclaimed upper limit, instead of the lower one<sup>199</sup>. Even back before the end of the Cold war, we could trace the appearance of an excessively robust strategy if not nuclear arsenal to be considered as a minimum or sometimes even limited deterrence<sup>200</sup>.

Nowadays, it is much harder to determine the character of strategic deterrent, especially for power such as China whose nuclear arsenal is lagging far behind the other great powers. Being the bedrock of asymmetry, China has to search for ways to compensate its shortfalls and it is done through the more comprehensive approach to deterrence. Beside traditional military power, there are other structural components: "[E]conomic power, diplomatic influence, scientific and technological capabilities, and political and cultural unity, which serve to compel or deter opponents"<sup>201</sup>. This is what official Chinese documents label as integrated strategic deterrence. It means using various domains of warfare and various methods to conduct warfare to ensure that deterrence is credible and not dependent just on nuclear weapons, although they remain the

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<sup>196</sup> Mohan Malik 23.

<sup>197</sup> Gill and Ni 6.

<sup>198</sup> M. Taylor Fravel and Christopher P. Twomey "Projecting Strategy: The Myth of Chinese Counter-intervention," *The Washington Quarterly* 37(4), 2015: 171–187.

<sup>199</sup> Hua 61-62.

<sup>200</sup> Robert S. Wang, "China's Evolving Strategic Doctrine," *Asian Survey* 24(10), 1984: 1050.

<sup>201</sup> Heath, et.al. 45.

spearhead capability<sup>202</sup>. Finally, the most advanced notion not in official use is cross-domain deterrence, primarily intended to depict a resort to an emerging domain of space in order to deter traditional, hard military threats. Space as a not fully utilized domain is a suitable choice for a rising power like China, but not less cyber and pan-domain strategies can be proliferated.

### ***3.5 Comparative China, Russia and the US Nuclear Capabilities***

To compare comprehensively nuclear arsenals of the three great powers would require a whole volume. It is so especially because the pure quantitative assessment cannot tell the complete story. Namely, a number of warheads and delivery vehicles are just a tiny part of the system vital for nuclear weapons to function. Factors worth mentioning are command and control systems, strategic communications, surrounding infrastructure (such as silos, underground caves or military barracks) and many others. Nevertheless, other issues are stemming from the characteristics of the nuclear weapons. Their existence can boost numbers and statistics but often missiles are not fully operational or the technology is obsolete. Finally, we need to take the multidimensional approach to analyze nuclear weapons because their functionality depends on range, yield, payload, communications, protective measures, maintenance conditions and other technological features.

Therefore, a brief analysis that will be carried out here does not intend to make an absolute overview but based on a couple of factors suggest the trends connected to nuclear weapons. It will start with a comparison of the military spending of the three countries. After that, there will be a comparison of the number of warheads together with the assessment of their operational capabilities. Moreover, we will put next to each other the strength of the respective nuclear triads. Finally, major flaws in the currently existing Chinese nuclear arsenal and its future development prospects will be identified.

#### **3.5.1 Military spending**

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<sup>202</sup> Michael S. Chase and Arthur Chan, *China's Evolving Approach to "Integrated Strategic Deterrence* (Santa Monica, CA: RAND Corp., 2016).

According to the available SIPRI data for the year 2018<sup>203</sup>, we can see that the US military budget is bigger than the sum of all the other military budgets of the top ten spenders. This is significant when considering how big military infrastructure USA maintains, composed of many structures and integral operative sectors. Research and Development, especially through the DARPA agency provides top-level scientific expertise for development of the cutting edge defense technologies and has a specific share of the budget. USS nuclear forces are among the most prominent parts of the budget with 77 billion dollars invested in various initiatives including nuclear modernization and missile defense . Although not numerically the biggest nuclear arsenal, it has by far the largest number of investments in its maintenance and improvement. US nuclear weapons spending overcomes the complete Russian military budget. The second spender is China with 250 billion dollars. Here is very important to note two things. First, China has never disclosed its full military budget and therefore all the data we are basing our assessments is provisional and approximate. Second, the public was never given the specific data of what the percent of spending on nuclear weapons is. Because of those two factors, it is almost impossible to trace the real level of development of the Chinese nuclear arsenal, although it certainly follows the overall growth. Precisely the growth in numbers is much more valuable fact than the final amount spent. Namely, since Xi Jinping took the power and started sweeping reforms China has had a double-digit increase in military spending: from the 50 billion in 2008 to 250 billion in 2018<sup>204</sup>. According to the dynamics of the disclosure of new nuclear technologies, we can draw a general conclusion that investment in that particular sector follows if not leads the growth.

Russian military budget is conditioned by the least competitive economies of the three in the analysis. Primarily, it is because of dependency on the export in one sector with two raw materials, oil and natural gas. Its military budget similar to the Chinese has a number of publicly undisclosed data, but what we can conclude is that the majority of the money goes to maintaining

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<sup>203</sup> SIPRI, "SIPRI Military Expenditure Database," *SIPRI Databases*, 2018, 02.05.2020, <https://www.sipri.org/databases/milex>.

<sup>204</sup> China Power Team, What Does.

a vast standing army, particularly infantry and air force. There are numerous reports of aging nuclear arsenal in Russia, despite Putin revealing six groundbreaking strategic weapons<sup>205</sup>.

### 3.5.2 Robustness of nuclear arsenals

Up to date, numerical data casts a light on often confused and mistaken correlations among major nuclear arsenals. As can be seen in Kristensen and Korda, Russia and the USA are the only countries to have deployed nuclear weapons meaning that they are in full combat readiness with warheads being physically attached to the delivery vehicles<sup>206</sup>. Certainly, those capabilities range in all the three legs of the nuclear triad. This is the legacy of the Cold war when the two superpowers were in a constant imminent threat of a conflict that could easily escalate into a nuclear showdown. No other countries have deployed nuclear weapons, which is in accordance with the NFU policy and NPT treaty regulating the warheads to be kept separately from the delivery vehicles. The peculiarity of the Russian and US nuclear arsenals is that they have a bilateral New START treaty that prescribes the maximum amount of deployed missiles, not touching upon stockpiles which are extremely large in both cases. There is as well an array of obsolete nuclear weapons that are waiting to be either disposed of or sold to other countries in case of those with non-nuclear warheads or those forbidden by bilateral treaties. Common wisdom goes that Russia has the most robust nuclear arsenal, while the US has the most modern one.

There is still some space for the Chinese nuclear arsenal to participate in global share. Namely, as was the case with military budget, again we have just estimates of the number of warheads. China has 290 warheads which can be a bit outdated since the majority of recently discovered weapons have not been counted in, primarily DF-41 and DF-31AG. Nevertheless, the number of warheads has improved greatly when compared with the situation of the Deng period and constant growth indicates how serious China is in their modernization efforts. It is critical to note that the majority of recently produced nuclear weapons is of top-level quality with the clearly

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<sup>205</sup> Nuclear Threat Initiative, "Russia", *NTI*, Oct. 2018, 16 Mar. 2020, <https://www.nti.org/learn/countries/russia/nuclear/>. BBC, Putin.

<sup>206</sup> Kristensen and Korda.

defined missions, while in the case of Russia and the US, Cold war thinking has been preventing both countries to conduct appropriate changes in their nuclear postures. Finally, the number of Chinese warheads should be diminished because of certain obsolete technologies such as DF-5 and JL-1 which will be substituted with their modern counterparts as soon as DF-41 and JL-3 enter mass production.

A realistic analysis shows the almost unbridgeable gap between Russian and US and other nuclear arsenals. On the contrary, other nuclear countries, especially China have never even proclaimed an attempt to catch up with those two in numerical sense. We can interpret Chinese NFU policy and defensive nuclear posture as a sign of weakness, but a much more wise approach would be to validate the thinking about lean and effective nuclear arsenal together with advanced notions such as cross-domain deterrence. During the Cold war, the two blocks had economic resources and luxury to produce almost unlimited pieces of nuclear weapons, but China aside from the possible mobilization of resources is obviously oriented towards creating a qualitatively admirable capability in the long term.

### **3.5.3 Strength of nuclear triads**

Arguably the most important part of the analysis is to compare currently existing nuclear triads of the three countries. This is not just for the technological showoff, but also strategic importance that this accomplishment has. Russia and the US traditionally have been developing plenty of different nuclear technologies in an attempt to take decisive primacy. Following the aforementioned discussion, China formally has a nuclear triad, but its strength comes with a big question mark. The most credible sources differ in interpretations of the triad, but almost, as a rule, it can be seen that the intelligence community produces worst-case scenarios while think tanks provide much more fairground for discussion. DIA claims that with the development of new SSBN, China has achieved a credible nuclear triad<sup>207</sup>. On the other side, CSIS considers it to be partial, not because of the sea-based leg, but the lack of nuclear-capable strategic bomber<sup>208</sup>.

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<sup>207</sup> *United States, Defense Intelligence Agency, China Military Power: Modernizing a Force to Fight and Win* (Washington: DIA, 2019) 55.

<sup>208</sup> China Power Team, *How Is*.

Both interpretations have their point, but for the sake of this analysis, it will be taken for granted that China has generated nuclear triad with its credibility not being proven in practice.

When it comes to the land-based leg of the nuclear triad, Russia is traditionally setting the standards with its R-36M2 (NATO designation Satan), RT-2PM2 Topol-M and RS-24 Yars being all but the invincible ground nuclear force. All of those missiles have indigenous Glonass guidance and are solid-fueled, with modifications for silo versions and road-mobile, while RS-24 Yars has MIRV capabilities<sup>209</sup>. US ICBM force has been cut down to the wide production of LGM-30G Minuteman III which has single warhead and MIRV versions<sup>210</sup>. Chinese ICBM arsenal tends to catch up with those two through the deployment of solid propelled DF-41, while DF-4 and DF-5 being almost obsolete. DF-5B which is modernized and MIRV-ed version presumably can have some operational value.

US Navy leads the race of SSBNs and featured missiles. Ohio-class SSBNs are considered as the top in its class, while even they are subject to change in the near future, as soon as Columbia-class enters service<sup>211</sup>. Similarly to the ICBM program, SLBM has been reduced to the Trident II D-5, used both by US Navy and British Royal Navy, having by far the best characteristics when compared to all the foreign counterparts<sup>212</sup>, including the longest range of 12 thousand kilometers and up to 8 MIRVs. Russian Borei-class SSBNs are the most robust currently operational and are equipped with SLBMs of different ranges and MIRV capabilities: SS-N-18 Stingray, SS-N-23 Skiff, and SS-N-32 Bulava<sup>213</sup>. Again, Chinese arsenal here is the smallest and least capable, but strategically vital. It is composed of type-096 SSBNs and currently in development type-098. They are equipped with missiles from the JL series, lagging behind Russian and US missiles in terms of range and propulsion<sup>214</sup>.

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<sup>209</sup> Federation of American Scientists, "Intercontinental Ballistic & Cruise Missiles," *FAS*, 16 Mar. 2020, <https://fas.org/nuke/guide/russia/icbm/index.html>.

<sup>210</sup> Military.com, "LGM-30 Minuteman III," *Military.com*, 16 Mar. 2020, <https://www.military.com/equipment/lgm-30-minuteman-iii>.

<sup>211</sup> Naval Technology, "Columbia-Class Ballistic Missile Submarines," *Naval Technology*, 16 Mar. 2020, <https://www.naval-technology.com/projects/columbia-class-ballistic-missile-submarines/>.

<sup>212</sup> US Navy, "Trident II (D5) Missile," *US Navy, Fact File*, 15 May 2019, 16 Mar. 2020, [https://www.navy.mil/navydata/fact\\_display.asp?cid=2200&tid=1400&ct=2](https://www.navy.mil/navydata/fact_display.asp?cid=2200&tid=1400&ct=2).

<sup>213</sup> China Power Team, How Is.

<sup>214</sup> China Power Team, Does China.



Both Russia and the US have advanced strategic bomber system equipped with a range of weapons, from ALBMs to gravity bombs and precision-guided munitions. US keeps the primacy in stealth technology with its B-2 Spirit bomber still being the aircraft that can avoid all the existing defenses<sup>215</sup>. The traditional fleet of bombers led by B-52 Stratofortress will be substituted together with B-2 in the moment when B-21 Raider has full operational capacity. Russia has always had a robust long-range bomber force through its Tupolev program with Tu-160 being the most widely used. China is still waiting for the production of its first indigenous bomber H-20, presumably encompassing stealth technology.

### 3.5.4 Obstacles to Chinese nuclear development

Despite being a fast-growing army, PLA pertains to certain negative aspects that will need to be addressed in the future. One way to look at those problems is to divide them into internal and external, where the former would be inherent to the functioning of the PLA, while the latter stemming from the objective circumstances such as the character of interstate relations or geopolitics. According to Chase et.al. the best angle to assess it is through concentrating on two separate clusters: institutional and combat capabilities<sup>216</sup>. Xi Jinping has dedicated a lot of attention to improve the institutional capabilities of the PLA. In doing so, he ordered radical changes in command structures, operational security and increased the necessary level of military discipline. The most visible change was the transformation of military regions into the modern system of theater commands. However, one issue transcends all of the aforementioned and it is corruption. Being a Chinese problem for centuries, it is all but impossible to eradicate completely. Some of the attempts intended to solve it were political campaigns with harsh penalties and frequent rotations in the top officer corps. The second cluster of obstacles starts with the objective incapacities of PLA to implement the last generation of complex systems, such as joint command centers within a theater command. Furthermore, know-how is missing in

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<sup>215</sup> Jacopo Prisco, "B-2 Spirit: The \$2 Billion Flying Wing," CNN, 29 Jan. 2020, 16 Mar. 2020, <https://edition.cnn.com/style/article/b-2-spirit-stealth-bomber/index.html>.

<sup>216</sup> Michael Chase, et.al., *China's Incomplete Military Transformation: Assessing the Weaknesses of the People's Liberation Army* (Santa Monica, CA: RAND Corp., 2015) 9.

relation to the recently developed weapons systems, causing delays in their full integration. Peculiarities of Chinese defense industries under the auspices of CCP do not have to be particularly stressed, it is enough to mention lack of quality control and competition.

PLARF and featuring nuclear arsenal are not an exception to the abovementioned structural flaws. In addition to that, certain specific problems are arising as a consequence of the gap between Chinese and other major arsenals. Therefore, despite possibly being lean and effective, the numerical discrepancy prevents China from even thinking about catching up with China or the US, even in the distant future<sup>217</sup>. Directly related to that is the question of survivability because larger nuclear countries can afford to themselves in a potential escalatory scenario to lose a number of missile in salvos, while China does not have that luxury. Therefore, the survivability of the Chinese arsenal needs to be protected in other ways, by putting them underground or in mountainous regions, consequently increasing the costs, but also the time period needed to deploy the weapons. Finally, a "complex nuclear security environment"<sup>218</sup> prevents China from transforming its nuclear posture, strategic goals or even introducing more assertive weapons systems, because other traditional or emerging powers can consider it bellicose. As the world is perceived to strive towards multipolarity, the number of actors is increasing, thereby confronting many different, but equally strategically demanding interests.

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<sup>217</sup> Chase, et.al. 123.

<sup>218</sup> *China, State Council, Science of Military Strategy* (Beijing: Information Office of the State Council of the People's Republic of China, 2013).

## 4. Chinese Nuclear Rise and Strategic Stability

In order to address the relation between Chinese nuclear rise and great power strategic stability properly, certain pre-conditions need to be met. Namely, as it has already been defined, game-changing Chinese rise is embodied in its revisionism which will lead to the establishment of a new type of order. Therefore, this chapter will be divided into three parts. First, characteristics of Chinese revisionism will be explained through the alteration of their strategic concepts in relation to nuclear behavior. Particular attention will be dedicated to NFU policy, minimum deterrence, assured retaliation and overall defensive nuclear posture. Second, in a rather counterintuitive manner, the outlook of a new order will be presented to elucidate the consequences of revisionism. Asymmetry, triangularity and nuclear competition are in the main focus. Third, instead of putting it logically in the middle, shifts in strategic stability will be presented lastly. To a large measure compatible with the first two points, somewhat more attention should be drawn to the impossibility of functioning along with the traditional strategic stability concepts. Following the theoretical part and its definition of strategic stability, there will be an analysis of second-strike capability, mutual vulnerability, predictability, single domain operability, crisis and arms race stability and systemic polarity.

### *4.1 Chinese Revisionism*

Many authors would hurry to declare China as a member of the incumbent order so that marginal costs for the faulty policy of the past appear significantly less. Iain Johnston in a famous strategic culture manner meditates that "the wish to be richer and more powerful has not translated into a concerted military effort to replace the United States as the predominant state regionally or globally"<sup>219</sup>. This sounds like an appraisal of Chinese policy and subtle critique of those who deny the peaceful character of the Chinese rise.

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<sup>219</sup> Johnston. *Is China* 56.

However, Sheng upgraded that opinion by claiming that in comparison with Nazi Germany and pre-WWII Japan, current Chinese policy cannot pass as revisionist<sup>220</sup>. Finally, some other scholars went even so far to claim that China is in fact revisionist, but at the same time is not, calling that "revisionist stakeholder"<sup>221</sup>, or in other words, a country which is satisfied with the rules of engagement, but not with its internal position. What all of those opinions fail to see is the sophistication of Chinese policy which is still in Huntingtonian sense burdened with ethnocentrism. Cocker claimed that the majority of problems in great power relations come from looking at the same phenomena through different glasses<sup>222</sup>. In as much as the majority of scholars like to see China as a tamed dragon, the same stands that China can insist on its image to hide the real nature.

Has that not been the long-lasting strategy of active defense where operationally offensive acts are hidden under the veils of something promulgated in a defensive manner? Chinese strategy can easily be labeled as that of a slow rise, although it is intensified in the last couple of decades. Slow rise is adequately compared to the cooking of the frog because when it is cooked in a gradual manner it does not feel the heat until the very moment of death. The same stands here, China can challenge the order in a way that current stakeholders will recognize the very challenge when it will be too late to provide a meaningful response.

Therefore, the strategy of a serious rising power should from the very beginning be considered with due diligence. Jianren launches a strategic competition theory on the sample of China-US relations where all the tendencies in mutual relations were pushing for the more or less radical solution of the hegemony contender<sup>223</sup>. The whole one current of literature focused precisely on China as a dangerous actor in the international arena. Obviously, it was China threat theory fed by the spirits of the terrorist attack on the United States in 2001. One of the prominent supporters of such a theory has been Bill Gertz who was claiming that it is not that China is the only major long-term adversary for the US, but it engages thoroughly in sponsoring rogue countries such as

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<sup>220</sup> Sheng Ding, "Analyzing Rising Power from the Perspective of Soft Power: a new look at China's rise to the status quo power," *Journal of Contemporary China* 19(64), 2010: 258.

<sup>221</sup> Suisheng Zhao, "A Revisionist Stakeholder: China and the Post-World War II World Order," *Journal of Contemporary China* 27(113), 2018: 44.

<sup>222</sup> Christopher Cocker, *The Improbable War: China, the United States & the Logic of Great Power Conflict* (Oxford: Oxford University Press, 2015).

<sup>223</sup> Zhou Jianren, "Power Transition and Paradigm Shift in Diplomacy: Why China and the US March towards Strategic Competition?" *The Chinese Journal of International Politics* 12(1), 2019: 1-34.

North Korea, Pakistan and Iran<sup>224</sup>. In general, all of the books in the series of China threat theory were close to the claims on the steep economic rise, limited development of the PLA, assertive regional behavior or sub-threshold engagement in illicit activities<sup>225</sup>. However, none of them tackled Chinese nuclear rise in connection with revisionism.

This part of the chapter will deal with the changes in the main postulates of Chinese nuclear behavior and explain why they are indicators of Chinese deliberation to overthrow the order or at least to downscale the level of domination of current stakeholders. In doing so, four particular issues are pointed out: NFU policy, minimum deterrence principle, assured retaliation policy (although to a degree limited because it is even more prominently present in the latter parts of the chapter as well) and overall defensive nuclear posture.

#### 4.1.1 NFU policy

Quite intuitively, same as for every other country in any given context, no first use means that certain action will not be taken until a certain threshold has been passed. In this case, China will declaratory not employ nuclear weapons until it gets attacked by the very same. This was a reflection of the Cold war strategic environment where China wanted to remain a third party in a bipolar setting. This policy has certain consequences in a strictly military-technological sense. Namely, NFU suggests that a country is not ready for the war or that it considers an imminent nuclear threat as non-existent. In the Chinese case, nuclear warheads are stored separately from the missiles and its mounting significantly increases reaction time in the case of a nuclear attack<sup>226</sup>. Not so numerable Chinese ICBM force has had the biggest problems because their three-stage construction demands such an amount of time that adversarial reconnaissance will have sufficient space to prepare appropriate defense mechanisms or even launch a surprising preemptive strike on the critical nuclear infrastructure.

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<sup>224</sup> Bill Gertz, *The China Threat: How the People's Republic Targets America* (Washington D.C.: Regnery Publishing, 2002).

<sup>225</sup> Gertz. Robert Spalding, *Stealth War: How China Took Over While America's Elite Slept* (London: Portfolio, 2019). Steven W. Mosher, *Bully of Asia: Why China's Dream is the New Threat to World Order* (Washington D.C.: Regnery, 2017).

<sup>226</sup> Boyd 86.

Understandably, a shift in the strategic situation after the Cold war left China in the position to question its NFU policy since there were no blocks anymore to avoid confrontation with. However, that was not the only factor that made China reassess its approach: "NFU policy came under pressure as a result of changes in military technology and threats to Chinese national interests"<sup>227</sup>. Development of more robust ICBM arsenal together with the building of the sea-based deterrent as an assurance signal that NFU does not have as much sense as it had during the Cold war. Of course, China never left the policy on paper, but certain tendencies could be easily spotted, such as putting a small unit of ICBMs at the highest level of operational readiness but also building such a technology that enabled significantly faster preparations for nuclear war. In that sense, we can describe two alternative solutions to the NFU policy probable to be employed in the future.

- a. Without completely disregarding the NFU, China could resort to the so-called launch-under-attack or launch-on-warning policies: "China would launch its own nuclear weapons upon receiving warning of an enemy's nuclear launch"<sup>228</sup>. Although it is a significant distancing from the NFU, it still stays entirely in the domain of Chinese non-attack, but diminishing the efforts needed to attach warheads to missiles or even put them together. Some authors claim that launch-on-warning posture would increase deterrence in terms of mutual stability<sup>229</sup>. This option would require China to improve its early warning strategic infrastructure in order to be able to get timely intelligence, but also to decrease the probability of an inadvertent nuclear encounter. Satellites, radar and beyond-the-horizon technology are indispensable to this purpose.
- b. When compared to the launch-on-warning, there is an option much closer to what we can label to be revisionist. Namely, it is an ambiguous first use policy (AFU). In a theory developed by Lanoszka and Scherer, AFU is a commitment towards deterrence by the uncertainty of nuclear use<sup>230</sup>. The problem that immediately comes to mind is the credibility of such a strategy because Chinese arsenal is still not on the sufficient level to be able to preemptively attack Russian or that of the US without bearing capital losses.

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<sup>227</sup> Heath et.al. 49.

<sup>228</sup> Chase and Chan 131.

<sup>229</sup> SMS, 2013 175.

<sup>230</sup> Lanoszka and Scherer.

As a reflection of that, the strategy of existential deterrence has been present for a long time to claim that potential Chinese attack can come from the instinct for the very survival of the nation. It is the last of the three are the main ways towards destabilization if AFU is accepted as an official posture: the downward-spiral pathway, the accidental-war pathway, and the use-it-or-lose-it pathway<sup>231</sup>. Regardless of whether it will be existential or inadvertent, the probability for an escalatory scenario being a consequence of AFU adoption is severely augmented.

#### **4.1.2 Minimum deterrence**

As an official Chinese nuclear strategy proclaims: "China has always kept its nuclear capabilities at the minimum level required for maintaining its national security"<sup>232</sup>. Keeping the arsenal lean and effective, dedicated to quality came as a result of an inferior strategic position during the bipolar world setting. Therefore, offensive nuclear strategies were not an option for China since those would barely have any credibility. Eliminating the first-strike capability, the only viable way for China was to pursue second-strike capability and to limit its development. It was done through the minimum deterrence which is said to be the situation "in which nuclear weapons are deployed in numbers sufficient only for retaliatory deterrence"<sup>233</sup>. Not only its number was not enough to attack any nuclear power of the era, but it was impossible to claim full retaliatory capability in the explicit sense.

Therefore, minimum deterrence as by far the softest nuclear tactics meant that there is a degree of possibility for nuclear retaliation. Uncertainty proved to be efficient in those ages, but alongside the Chinese rise and technological development of weapon systems came the need to reform this policy since the level of capabilities did not match operational reality anymore. Many writers say that China can keep minimum deterrence policy on the declaratory level, but in fact, the mere fact of production of new advanced nuclear weapons speaks volumes about attachment

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<sup>231</sup> Lanoszka and Scherer 29.

<sup>232</sup> Kristensen and Korda 173.

<sup>233</sup> Graham Barral, "The lost tablets: An analysis of the concept of minimum deterrence," *Arms Control* 13:1, 1992: 59.

to the doctrine<sup>234</sup>. Horsburgh argued similarly that minimum deterrence is a strategically suitable concept, but on the operational level provides zero maneuver space for the PLA and precisely that is the reason why certain changes have already happened<sup>235</sup>. Finally, in terms of specific weapons, requirements of minimum deterrence are that you maintain an appropriate number of ballistic missiles with such characteristics that it is possible to hit the mainland of other nuclear powers. As an interesting addition, Rittenhouse Inglis adds that nowadays a certain amount of ballistic missiles is part of this equation because they can inflict surplus damage<sup>236</sup>. There are two options for China to pursue a set of different strategic circumstances, although some elements of both can already be seen.

- a. Being not extremely destabilizing, but intended to bring a larger degree of uncertainty is limited deterrence strategy. As put by Johnston it "requires sufficient counterforce and counter value tactical, theater, and strategic nuclear forces... If deterrence fails, this capability should be sufficient to control escalation and to compel the enemy to back down"<sup>237</sup>. To put it differently, limited deterrence adds a layer of potential warfighting to the already existing deterrence role of nuclear weapons. Accordingly, this means a significant increase in a number of warheads and the development of advanced nuclear weapons such as solid-fueled ICBMs and intercontinental range of SLBMs. It is important not to neglect that the Chinese arsenal still remains quantitatively smaller than those of peer competitors, but the trick is in the non-defined character of the arsenal itself<sup>238</sup>. For example, China limits itself at 300 warheads which are skyrocket when compared to the Cold War but it does not prescribe whether it will be an arsenal of 300 ICBMs which is a serious strategic level stockpile, or 280 SRBMs and 20 ICBMs, in the worst-case scenario a relatively credible regional threat, but obviously intended to protect border seas. Therefore, China is left with the freedom to determine and potentially disrupt the adversarial plans.

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<sup>234</sup> Eric Heginbotham, Jacob L. Heim and Christopher P. Twomey, "Of Bombs and Bureaucrats: Internal Drivers of Nuclear Force Building in China and the United States," *Journal of Contemporary China* 28(118), 2018: 19.

<sup>235</sup> Horsburgh 104.

<sup>236</sup> David Rittenhouse Inglis, "Minimum deterrence, maximum stability," *Bulletin of the Atomic Scientists* 42, 1985: 46-49.

<sup>237</sup> Alastair Iain Johnston, "China's New "Old Thinking": The Concept of Limited Deterrence," *International Security* 20(3), 1996: 5-6.

<sup>238</sup> Hua 60.



- b. A very prudent alternative to minimum deterrence in Chinese strategy is flexible deterrence. The ambiguity, uncertainty and painstaking patience have all been already mentioned, but here they are embodied in the secrecy and mystery around the Chinese nuclear program. Namely, to conceal every aspect can be the best strategy because major intelligence services are famous for their overestimation of rising power strength, while actors in the political sphere have tendencies towards the other pole, to underestimate it. Chong-Pin Lin defined it prominently: "[China] has been deliberately ambiguous about targeting and launch doctrine, and has balanced caution and bravado to keep adversaries uncertain about their ability to achieve nuclear or conventional victory"<sup>239</sup>. Therefore, without any strict operational requirements, flexible deterrence means gradual development far from the eye of the public.

#### 4.1.3 Assured retaliation

A legitimate argument can be made that assured retaliation is quite compatible with the minimum deterrence and no-first-use strategies. In fact, it is, just with a different focus. Namely, assured retaliation is the promise of the second strike after the deterrence fails. According to an influential article, the two principles governing this strategy are counterattack in self-defense and limited development of nuclear weapons<sup>240</sup>. Assured retaliation has been one of the main reasons to elevate SAC into PLARF, ensuring its independent operational freedom. Nevertheless, its credibility has been constrained to the strictly defensive role. Limited development of nuclear weapons is actually a modernization of existing land-based and production of the brand new sea-based deterrent and warfighting capacity. Again, as in previous cases, Chinese comprehensive rise left a strategic vacuum where more offensive strategies are starting being promulgated or are already implicitly present<sup>241</sup>.

- a. A *sui generis* way of preserving doctrine and amending it is euphemistically labeled by Cunningham and Taylor Fravel as assuring assured retaliation: "[I]ncreasing the

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<sup>239</sup> Chong-Pin Lin, *China's Nuclear Weapons Strategy: Tradition within Evolution* (Lexington, MS: Lexington Books, 1988) 68. From the time the book has been written, this Chinese strategy got even more sophisticated.

<sup>240</sup> Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Posture and U.S.-China Strategic Stability," *International Security* 40(2), 2015: 7–50.

<sup>241</sup> Mohan Malik 23.

number of missiles and warheads that can strike the continental United States... [A]mbiguity over the application of its no-first-use policy... [D]eveloping a larger force of more survivable ICBMs that are more capable of penetrating a missile defense system"<sup>242</sup>. As much as assured retaliation increased prospects of strategic stability in the previous state of affairs, its assuredness acts quite on the contrary. The rising level of secure second-strike is increasing the probability that part of it will become the first-strike arsenal, destabilizing already almost monolithic mutual nuclear relations of the US and Russia, as will be seen later in this chapter. A critical factor is a preemptive attack against Chinese nuclear infrastructure which could be retaliated against in a nuclear way regardless of the nature of the attack. That is why assuring assured retaliation leaves a large space for inadvertent escalatory actions.

b. Quite a rare voice in official Chinese documents that witness more offensive tendencies comes in a version of Chinese military doctrine: "China adopts a 'revenge' logic of nuclear deterrence and would seek to reinforce the credibility and efficiency of nuclear deterrence through improving capabilities for a nuclear counterattack"<sup>243</sup>. This essentially means that an ultimately defensive strategy loses its center of gravity and starts being ambiguous on the tactical level, engaging in something called counter-value nuclear war doctrine<sup>244</sup>. Limited warfighting is quite hard to distinguish from AFU policy because if the nuclear response comes as a consequence of a grave conventional attack it is still considered as first-strike. Therefore, the higher degree of ambiguity in the Chinese launch and target nuclear doctrine, the higher possibility is that warfighting will take over deterrence. PLA practice defines the operational stages of nuclear limited warfighting counterattack doctrine: "[I]nitial nuclear strikes, follow-on strikes, campaign firepower maneuver, battle damage assessment, handling special situations, and concluding the campaign"<sup>245</sup>. It is not needed to emphasize the revisionist character of this strategic approach since the introduction of the first-strike logic severely disrupts the present nuclear balance and opens the gate for a triangular order which will be described later in this chapter.

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<sup>242</sup> Cunningham and Taylor Fravel 11-26.

<sup>243</sup> *Science of Military Strategy 2013* 172.

<sup>244</sup> Mohan Malik 23.

<sup>245</sup> Heath et.al. 48.

#### 4.1.4 Defensive nuclear posture

From the US point of view, Ken Waltz formulated a great sarcastic statement: "We accused them of favoring war-fighting over deterrent doctrines, while we developed a war-fighting doctrine in the name of deterrence"<sup>246</sup>. Overall Chinese defensive attitude has been considered a threat because it is considered a declaratory act that does not have any backup in reality. Official Chinese documents always emphasized a mix of defensive and self-defensive strategy<sup>247</sup> which are the two nuances of the same being a general principle rather than a promise of non-existent ambiguity. Namely, we can interpret it as a drive to declare certain behavior as legitimate under the guise of being defensive of the survival interest.

On the contrary, many authors claim that sweeping reforms of 2015 under Xi Jinping, PLA modernization together with command and doctrinal development, affected overall Chinese force posture both on the regional level and global one, potentially leading to the great instabilities<sup>248</sup>. Those are embodied in greater assertiveness and intimidating behavior which is slowly starting to lose the premise of China being a responsible global actor. While we should follow Waltz and avoid false hypocrisy, precisely the regional behavior is very significant because alterations of its defensive status can have large consequences on nuclear posture: "Translating its wealth into a stronger military and more assertive regional posture, China's coercive action to exert its claims over disputed territories is widely seen as a litmus test of China's broader strategic intentions"<sup>249</sup>.

Therefore, here we can find a definite answer to Chinese revisionism because at the moment when it becomes offensive on both strategic and operational level no one would be able to oppose revisionist nature. Rationally enough, it is hard to imagine China playing as open cards as the last sentence postulated and as always their real strategy is embodied in concealment. Of course, we are talking about the old Maoist concept of active defense which means that China

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<sup>246</sup> Waltz, *The Emerging* 46.

<sup>247</sup> As quoted in Kristensen and Korda 173.

<sup>248</sup> Gill and Ni 1-15.

<sup>249</sup> Zhao, *A revisionist* 381.

will retain defensive attitude on the strategic level while being offensive on the operational to thwart the interests of an adversary.

I claimed that in accordance with the revisionist premise, the concept of active defense has experienced a deep transformation and is soon to become precisely the opposite of its original purpose: strategically offensive but operationally defensive. Despite the fact that it can sound paradoxical, certain evidence can already be found in Chinese action. One prominent author writes about the current active defense concept: "A first strike by an adversary may not necessarily be military in nature: Hostile activities in the political and economic realms may also justify a PLA response. In this case, the Chinese leadership might justify a military response even if the PLA fires the first shot, as according to active defense concept, the threat to China would already exist"<sup>250</sup>.

It is obvious that this preemptive vision of active defense cannot be maintained in conditions of strategically postulated defensivism. Similar to the US strategy after the terrorist attack on American soil, China is gradually drawing the red line in border seas and whoever crosses it can be subject to a nuclear response. In that way, actually assertive regional posture becomes operationally defensive (waiting for the enemy to cross the line) but strategically offensive (the first strike can be asymmetric, disproportional and robust).

There is also an inherent danger for China to pursue the traditional active defense in relation to major powers, Russia and the US. The danger comes from the possibility of those powers to implement the same strategy and comprehensively negate Chinese efforts: "While active defense against another major power is extremely difficult, it should not be very hard for a major power to erect an active defense capable of handling the retaliation, say, of Guatemala, supposing Guatemala had a few ballistic missiles"<sup>251</sup>. Of course, the example from the quote is extreme, China is incomparable to Guatemala, but having in mind the comparison of nuclear arsenals, especially the strength of nuclear triad, for China it is all but impossible to be operationally or tactically offensive towards great powers because their defenses are impenetrable by a modest non-nuclear attack. And of course, great powers can adopt an active defense strategy on China

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<sup>250</sup> Dennis J. Blasko, *The Chinese Army Today: Tradition and Transformation for the 21st Century* (New York, NY: Routledge, 2012) 124.

<sup>251</sup> Albert, Wohlstetter, "Nuclear Sharing: NATO and the N+1 Country Source," *Foreign Affairs* 39(3), 1961: 365.

because their limited actions leave China essentially without a prospect for the symmetric answer. That is why China can try to engage in operationally defensive actions such as leaving certain maritime corridors and to subsequently try to strategically exploit eventual minor conflicts. The more China will grow, the fewer constraints would be there for it to promulgate an openly offensive or at least ambiguous strategy and challenge the incumbent order.

## ***4.2 The Birth of a New Order***

Gill and Ni summed their concerns over the nature of Chinese nuclear rise in the following statement: "While stability at the strategic nuclear level may be theoretically enhanced as China develops a secure second-strike capability, ambiguities in China's nuclear posture could lead to dangerous instabilities in the future"<sup>252</sup>. Obviously, post-Cold war order cannot function with a rising power contending basic premises: nuclear stability between the US and Russia as well as political dominance of the US around the globe. This was a kind of "unilateral-destruction/mutual-benefit" romance between the two superpowers where Russia as a threat has been a structural condition for the US to maintain NATO and leave its harsh footprint across the Atlantic, across the whole world<sup>253</sup>. At the time, no one believed that China will rise to the level of even being a candidate for great power status. After all, Chinese soft power and sort of cultural hegemony would not be such a problem if those were not followed by reforms within the PLA and precisely that is the reason why this thesis deals only briefly with the soft power as a Chinese strategic instrument. Namely, modernization of nuclear arsenal together with the procurement of advanced weapons and in emerging domains will unavoidably affect the outlook of the system. Not necessary will it result in a major war or in the installment of China as a leader of the brave new world, but to avoid noticing the changes would be an indicator of critical shortsightedness.

This chapter will analyze the three changes brought by the Chinese nuclear rise in terms of the functioning of the international system. First, a somewhat different notion of asymmetry will be presented, that of domains rather than the relative state power. Second, as a logical consequence

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<sup>252</sup> Gill and Ni 15.

<sup>253</sup> Mearsheimer, Back to 50-52.

of the involvement of an additional major actor, we need to talk about the triangular system where deterrence and influence are becoming indirect and much more complex. Third, the word competition is used here instead of an arms race in order to elucidate the possibility that here will be involved much more than arms, but also that this race can have more than one winner or does not have to have an aim at all.

#### 4.2.1 Asymmetry

It is beyond a reasonable doubt that asymmetry has been present since the dawn of state-like formations. It was a measure of the capability of one actor when compared to the other, regardless of the character of capability: size, number of soldiers, diplomatic influence, natural resources or geographic endowment. Mastanduno put it in relation to the notion of organized order with a prospective dominant power: "Hegemonic orders reflect the interests and values of the dominant states that construct them and are based on both asymmetrical power and legitimate consent"<sup>254</sup>. The former is much more exploited, even indirectly because every order builds upon the traits of its leader or leaders. That is how we look at asymmetry in traditional, relative state power manner.

However, that is not completely applicable to the situation with the Chinese rise because that is a country with a huge military asymmetry when compared to Russia and the US but still it represents a major threat. We can find certain theoretical explanations, such as: "The greater the gap in relative power, the less resolute and hence more politically vulnerable strong actors are, and the more resolute and less politically vulnerable weak actors are"<sup>255</sup>. It can be that the Chinese rise caused increased attention of the major powers towards China, but still, we cannot see the particular political vulnerability of China which emerges comprehensively as a stable great power.

If it is hard to determine the causes of malfunctioning of relative state power asymmetry, it is certainly possible to see that it affects negatively the overall stability of the system. This is

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<sup>254</sup> Michael Mastanduno, "Partner Politics: Russia, China, and the Challenge of Extending US Hegemony after the Cold War" *Security Studies* 28(3), 2019: 480.

<sup>255</sup> Arreguin-Toft 95.

because legitimate attempts of smaller powers to protect their vital interests even through defensive strategies such as hedging can look like offensive balancing attempts for the incumbent<sup>256</sup>. Chinese nuclear modernization and PLA reforms, together with all the other aspects such as economic growth could all be oriented exclusively towards preservation of Chinese national security, but still would be looking at with skepticism from the courtyards of the two great powers. And that is the long-term consequence of asymmetry defined in a traditional way, a certain distrust towards the strengthening of any marginal actor by interpreting it as a threat towards the interests of the order. Nevertheless, asymmetry is not functioning in the same way nowadays. Instead of being stronger because you are bigger, today it is almost impossible to balance against the smallest but multi-domain aware country, let alone already established great powers or candidates for that status.

That is something that I label as asymmetry of domains where the advantage in one does not necessarily guarantee an advantage in all domains. For example, space assets can deny the conventional advantage and nuclear threats can deter exploitation of cyber advantage. Accordingly, a state with superiority in more domains can be labeled as stronger. China has for some time been a champion of domain asymmetry because it is comprehensively exploiting not fully utilized, under-researched or emerging domains in order to neutralize its relative gaps in the other<sup>257</sup>.

The two notions already mentioned are of particular importance here: integrated strategic deterrence and cross-domain deterrence. The former was described in detail in previous chapters being a set of PLA modernization measures intended to connect all military branches together with emerging domains and engage in a kind of total warfare, organized similarly to the American model or proposals of the so-called Russian Gerasimov doctrine<sup>258</sup>. To integrate strategic domains means essentially making nuclear weapons inseparable from the space and cyber domains where prospective Chinese nuclear threat will be followed by imposing damage on critical infrastructure in other domains of an adversary.

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<sup>256</sup> Brantley Womack, "China and the Future Status Quo," *The Chinese Journal of International Politics* 8(2), 2015: 128.

<sup>257</sup> Space and cyber domains particularly. While discussion on space efforts is presented in the previous chapter, cyber domain is mainly outside of the scope of the paper.

<sup>258</sup> Payne 2.

Cross-domain deterrence is simply threatening in one domain to preclude action in the other. The famous example is the Chinese ASAT test from 2007 where a simple DF-21 missile with different payload was used to eliminate an obsolete satellite<sup>259</sup>. The development of potentially harmful ASAT weapons is particularly sensitive for nations such as the US who are highly dependent on the space assets. Therefore, the US threat of a conventional or a tactical nuclear strike can be deterred by a Chinese ASAT attack since it would represent inappropriate and unacceptable damage. Namely, it is predicted that ASAT attack against US space infrastructure can endanger military network, civilian communications and even banking system. That is a classical example of asymmetry of domains where relativity of state power gets more complex and intertwined with other factors.

The asymmetry of domains has been present in Chinese official documents for some time. Science of military strategy speaks about "asymmetric capabilities as a means of balancing, defeating and deterring stronger foes"<sup>260</sup>. Local informationized warfare operational mantra is said to be a way to confront technologically advanced enemies<sup>261</sup>. A whole set of different weapons has been developed to emphasize the importance of domain asymmetry. As an example can serve DF21D known as "assassin's mace for maritime asymmetric warfare"<sup>262</sup>. We can draw a conclusion that the new strategic outlook will be based on exploiting the vulnerable areas of an adversary rather than trying to achieve parity and relative stability in the traditional manner. Two are the characteristics of the new asymmetry.

- a. Since there will be no clear hegemon in the system, all the actors must be used to a "new reality of negotiated asymmetry"<sup>263</sup>. In practice, it is the necessity of cooperation among great powers to diminish the possibility of inadvertent escalation or war based on a misunderstanding. All three powers have to adhere to similar principles of asymmetry in order for it to function.
- b. The relation between the asymmetry of domains and the stability of the emerging system is pretty one-dimensional. Namely, asymmetric triangular systems show

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<sup>259</sup> Gartzke and Lindsay. Lewis.

<sup>260</sup> *Science of Military Strategy 2013* 150.

<sup>261</sup> Heath et.al. 35.

<sup>262</sup> Johnson 319-325.

<sup>263</sup> Womack, China 116.



"signs of great instability"<sup>264</sup>. As will be seen later in the chapter, it is because of the impossibility of mutual relations since they always affect the third party. Therefore, a significant advantage in one domain can endanger one adversary, but open a window of opportunity for the second.

#### 4.2.2 Triangularity

The word choice here is of exceptional importance since triangularity serves as a more analytically useful tool than tripolarity. Namely, I claim that there is not enough strategic interaction among the US, China and Russia to claim the polarity similar to that of the Cold war. In this case, triangularity suggests that recurring patterns of conflict and cooperation are present, but not on the level of forming alliances. We can even trace triangular tendencies back to the Cold War when "for the United States, engagement with China in the 1970s–1980s originated from a strategic imperative to gain a geopolitical advantage over the Soviet Union, a common threat to both countries"<sup>265</sup>. That is something Roberts labeled as the grand strategic triangle of the Cold War<sup>266</sup>. Limited cooperation existed in as much as interests were common between any of the two powers. After the Cold war and disappearance of the bipolar division, triangularity became even more obvious through the set of ad hoc alignments instead of traditional alliances<sup>267</sup>. We can distinguish major marks of the new triangularity.

- a. Zafar Khan describes the phenomena of the triangular strategic dilemma<sup>268</sup> as a discrepancy between the perception of the nuclear behavior of others and the operational reality. For example, Chinese minimum or limited deterrence strategies can look to Russia and the US as credible attempts on achieving higher nuclear aims. Similarly, American defensive efforts through BMD can be interpreted as a threat to

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<sup>264</sup> Noguee and Spanier 321.

<sup>265</sup> Zhao, A revisionist 2.

<sup>266</sup> Brad Roberts, *Tripolar Stability: Relations among the United States, Russia and China* (IDA Paper P37-27, 2002) 3.

<sup>267</sup> Roberts 7.

<sup>268</sup> Zafar Khan, "Conceptualizing China and India's Transforming Strategic Force Postures under the Essentials of Minimum Deterrence," *Journal of Contemporary China* 26(105), 2016: 1.

- the Russian first-strike capability and Chinese second-strike capability. The most probable result of this updated strategic dilemma is increased escalatory potential.
- b. On the same line as with the previous point, we can interpret that broadening nuclear arsenals and featured doctrines will contribute towards alterations of the existing relative balance. Johnston labels it triangularization of nuclear postures<sup>269</sup>. In other words, developing advanced nuclear weapons, integrating emerging domains, even counting on domain asymmetry are all the potentially disruptive factors, especially for the hard-core status quo powers such as the US. We could have recently spotted such a tendency after the abrogation of the INF Treaty when both the US and Russia started production of SRBM and IRBM, in order to meet the increasing number of those produced by the PLA.
  - c. The fact that China remains out of the arms control process is significant for the triangularity because American and Russian efforts to limit nuclear weapons production can be deemed futile if the third major power is not participating<sup>270</sup>. On the other side, if China is put at the table with those two than the Chinese rise would be officially accepted and triangularity declared as a new form of great power relations. However, for the foreseeable time, the US and Russia are likely to try to find mechanisms on how to bypass arms control regimes and engage in advancing their nuclear arsenals even more, this time with the orientation to confront the Chinese actions exploiting their vulnerabilities.

### 4.2.3 Competition

Arms race either in the conventional or nuclear meaning of the word has long been present in international relations. Huntington defined it as: "A progressive, competitive peacetime increase in armaments by two states or coalitions of states resulting from conflicting purposes and mutual fears"<sup>271</sup>. Bull added quantitative and qualitative dimensions to this

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<sup>269</sup> Alastair I. Johnston, "Chinese Nuclear Force Modernization: Implications for Arms Control," *Journal of Northeast Asian Studies* 2(13), 1983: 22.

<sup>270</sup> Johnston, Chinese 23.

<sup>271</sup> Samuel P. Huntington, "Arms Race: Prerequisites and Results," *Public Policy* 8, 1958: 41.

definition<sup>272</sup>. The situation during the bipolar settings was quite straightforward with one peer competitor and many opportunities for alliance-making. However, in the post-Cold War era winning the arms race means multifaceted domination and leadership in many spheres. Therefore, the arms race is no longer solely about arms or race. That is why I prefer to use the term competition.

Paradoxical as it may sound, arms race beside being a classical build-up of military capabilities, can take a shape of deliberation to be economically stronger, exerting ubiquitous global influence and therefore enhancing prospects for aligning with many other actors, but also it can be about scientific explorations and advocating for certain policies that will enable the actor to push more comprehensively for its own agenda. The concept of race in arms race has changed as well. From the linear path and only one winner, today's number of laps or number of circuits is increasing and states winning the first part are not necessarily winners of the whole race. Bearing in mind the triangularity of the system, there is a possibility to have more than one winner of the race, especially if the strategic goals of multiple actors are overlapping. Finally, the competition today is pertinently domain-asymmetric because winning is not a synonym with achieving the strategic goals since those efforts can easily be mitigated by other powers through other domains.

To put it differently, an increase in the number of warheads within the Chinese nuclear arsenal, even surpassing other great powers does not mean that China won the competition since it is a fluid, multi-domain process where a small number of advanced hypersonic weapon can change the whole situation in a matter of minutes. At the same time, Russia with the most robust nuclear arsenal but the smallest military budget will be prone to major setbacks and will need to overcome many obstacles in order to credibly stay inside the competition.

### ***4.3 The Third Era of Strategic Stability***

There was no need to research stability until the world found out that something went wrong and put it on the dangerous tracks. Therefore, instability has been a structural condition for the stability to emerge. The very concept of strategic stability experienced a rise to

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<sup>272</sup> Hedley Bull, *The Control of the Arms Race: Disarmament and Arms Control in the Missile Age* (London: Weidenfeld and Nicolson, 1961) 5.

prominence during the dawn of nuclear weapons and is connected to the concepts such as crisis, arms race, nuclear strikes...<sup>273</sup> The concept has been developed in bipolar settings, with clearly defined adversaries with obvious zones of interest and recognizable models of behavior. It was relatively predictable and comfortable. However, the mere annihilatory potential of the weapons has been disruptive to the bone. End of the Cold war and deep shifts in the outlook of international relations pushed strategic stability to a new period with new strategic threats and imbalances such as nuclear terrorism and nuclear rogues. Nowadays, we are in the third redefinition of strategic stability caused by the comprehensive nuclear rise of China whose main characteristic is the proliferation of the new stability of instability. In other words, instability is becoming the new normalcy.

The purpose of this part of the chapter is to identify what are the key concepts being the change. In doing so, it will focus on the six of them: second-strike capability, mutual vulnerability, predictability, single domain operability, crisis and arms race stability and systemic polarity. Those six are carriers of the old concepts which will change radically in order to meet the operational reality of a new order described previously in this chapter.

#### **4.3.1 Second strike capability**

The importance of the retaliatory force in the nuclear world does not have to be especially emphasized: "One of the central concepts in nuclear analysis is the 'secure second strike'"<sup>274</sup>. As much as it was the bedrock of strategic stability in the bipolar world, the dynamics of the second nuclear age certainly demands the reformations. Obviously, the problem is the change of the system into asymmetric triangular where the third actor has become a part of the nuclear equation.

Therefore, what has been considered as the secure second-strike nowadays makes a country vulnerable to the attack by the third party. It is easy to conclude that the more robust Chinese second-strike capability will be, the less other countries will be able to keep their positions intact.

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<sup>273</sup> Colby 9.

<sup>274</sup> Austin Long and Brendan Rittenhouse Green, "Stalking the Secure Second Strike: Intelligence, Counterforce, and Nuclear Strategy," *Journal of Strategic Studies* 38(1-2), 2015: 38-73.

This is particularly true for Russia whose declining status clinging on military power may lead to significant changes when confronted with the loss of nuclear preeminence in relation to China<sup>275</sup>. Since nuclear weapons make alliances obsolete<sup>276</sup>, great powers will need to have the second-strike capability or divided into two potential adversaries or built up in the fierce competition this thesis predicts.

Much clearer is the Chinese strategy of developing thoroughly new powerful land-based DF-41 and sea-based JL-3 followed by the brand new SSBN. When they will make enough of those weapons, a major part of land-based arsenal will be devoted to the second-strike capability after the Russian attack, while sea-based triad leg, together with possible kinetic and orbital ASATs will be designated as a response for a US attack. Russia and the US have enough warheads and intercontinental technology to provide a credible retaliatory force on two fronts, but the US tries to embolden it by BMD, while Russia seeks to produce ground-breaking hypersonic weapons. This transformation from the second-strike capability to a set of second-strike capabilities brings much instability, uncertainty and loss of confidence in traditional nuclear postures.

Two are the main characteristics of this shift. First, great powers will need to cope with strategic interdependence, a number of chain reactions caused by every nuclear action<sup>277</sup>. For example, China assuring assured retaliation towards the US may increase the feeling of insecurity in bordering Russia because their reaction time for missile launch is severely diminished when the distance to China is taken into account. The same principle goes for the US installing BMD sites in Devuselu and Redzikovo as a means of intercepting Chinese ICBMs, but also possibly bringing into a vital danger the whole Russian first strike capability which has been considered as untouchable since the Cold war era.

Second, great powers may need to engage in triangular second-strike deterrence<sup>278</sup> where the complex web of interactions leads to a new vision of strategic stability solely in the conditions of absolute self-help within the system, without the possibility of alignments or more serious types

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<sup>275</sup> Christopher P. Twomey, "Asia's Complex Strategic Environment: Nuclear Multipolarity and Other Dangers," *Asia Policy* 11, 2011: 70.

<sup>276</sup> Waltz, *The Emerging* 73.

<sup>277</sup> Garcia, *Strategic* 355.

<sup>278</sup> Robert E. Harkavy, "Triangular or indirect deterrence/compellence: Something new in deterrence theory," *Comparative Strategy* 17(1), 1998: 63-81.

of cooperation. In operational reality, this will mean that second-strike capability is at the same time considered as the worst-case third strike capability where an attack from one great power can be followed by an attack from the second great power. The nuclear forces will need to undergo reconstruction in order to deter credibly all those strikes. Whether it is done through concealment and denial, nuclear diversification or perimeter systems like the Soviet "dead hand", the principle is very clear: prepare and deter like there is an imminent threat of two subsequent nuclear strikes.

#### 4.3.2 Mutual vulnerability

The concept of mutual vulnerability comes from the period of the second redefinition of strategic stability: "[A] multifaceted systemic echo of the premise of mutually assured destruction in the era of nuclear stalemate"<sup>279</sup>. As a set of positive relations paradoxically being built on the foundations of adversarial relations, together with the second strike capability, it was the governing principle of strategic stability for some time. Green and Long claim that mutual vulnerability advanced the concept of MAD which could be endangered by the existential threat to any of the great powers and label it deep MAD<sup>280</sup>. It is an indispensable bond between the two powers so that even the gravest threats will not be enough to essentially attack the other great power because a window of having certain internal shortfalls being recognized by the other actor represents possibly unacceptable damage. Nevertheless, the involvement of the third great power puts an end to such a simple equation. Mutual loses its predicament and can be transformed either in common or a set of mutual. Both options are burdened with instability and take away the tender feeling of being safe in the bipolar nuclear world.

The two options which shape will the mutual vulnerability take we should turn upside-down Hui Zhang and his appeal for the quest of mutual vulnerability in the US-China relations<sup>281</sup>. Namely, he is juxtaposing mutual vulnerability and absolute security, where the triangular structure requires the very turn to absolute security. This would mean total refusal of participating in a

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<sup>279</sup> Jorge Nef, *Human Security and Mutual Vulnerability* (Ottawa: IDRC, 1999) 13.

<sup>280</sup> Brandan R. Green and Austin Long, "The MAD Who Wasn't There: Soviet Reactions to the Late Cold War Nuclear Balance," *Security Studies* 26(4), 2017: 606-641.

<sup>281</sup> Zhang 23.

kind of mutually bounding vulnerability relations and commit solely to the first and second strike dynamics. In practice it signals the impossibility of looking at asymmetry in dualistic views and for China to deter the US nuclear strike with the space threat because Russia does not have any reasons to participate in such a conjuncture. Similarly, if the US and Russia decide to continue to pursue a mutual vulnerability strategy, then China will be in increasing advantage as its nuclear arsenal becomes more robust. Therefore, absolute security turns out to be the viable strategy of all the actors for all the actors.

The second option is so-called spectral deterrence: "[n]eutral stability underwritten by reliable active defenses, where plausible, plus capabilities for survivable second-strike under any circumstances. This type of spectral deterrence strategy offers neutral stability without in all cases requiring mutual vulnerability"<sup>282</sup>. Aside from the transformed second-strike capability described earlier, here we can notice that United States has had the most far-reaching strategy when they committed a large amount of money for missile defenses which can be easily transformed into the offensive instruments, such as Aegis Ashore system installed in Europe where SM-3 missiles can become first strike weapons in a matter of hours. Chinese geographical position enables the strategic positioning of appropriate nuclear assets all over the territory but also opens up many unwanted corridors and preclude fast groupings of weapons for salvo strikes. Finally, Russia can always count on its diversity of nuclear systems to engage in prospective games of limited nuclear escalation for the sake of achieving deterrent aims.

### **4.3.3 Predictability**

If anything, bipolar strategic stability functioned on the premises of predictability where the two clearly defined adversaries were at least tacitly respect the same strategic rules. As much paradoxical, it may sound, precisely the possibility of nuclear annihilation guaranteed that it will not happen. The Post-Cold war system of strategic stability was marked with the new deterritorialized threats that brought a certain level of restlessness. However, those were swiftly reterritorialized and brought to strict constraints. Chinese nuclear rise, though, is quite the opposite story. All but impossible to tame and inherently unpredictable: "Careful observers did

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<sup>282</sup> Miles 435.

not assume that China had become malevolent but, if not a ‘China threat’, the ‘China ambiguity’ became a universal worry”<sup>283</sup>. In strategic terms, threat and ambiguity are quite the same, bringing the approximate level of disturbance within a system.

In the new asymmetric triangular competition, we have three different levels of predictability. As it has already been said, China is publicly very transparent, but if you pay attention to details, you find many conflicting and enigmatic details. That could be seen numerous times throughout this thesis. On the other side, the United States' strategic posture focuses on transparent capabilities, even to the level that we have insight into the particular technical capabilities and regular reports of various political and military stakeholders<sup>284</sup>. Russia has for a long time kept its transparent policy of ambiguity with the strategies such as escalate do de-escalate which is nothing more than a promise that no one would know the character of Russian engagement until it happens. Although the ideal nuclear world would be that with a universal mechanism to prevent rogue or suspicious use, recent redefinition of strategic indicated that in reality, there is no way to predict nuclear behavior.

Finally, an early article by Zoppo suggests that even then certain destabilizing tendencies were to be seen: “[D]istinguishing feature may be the ambiguity of signals between the superpowers about strategic force postures or about intentions to race for superiority or to stabilize at some kind of parity”<sup>285</sup>. This view on grand strategic goals can be translated to a lower degree of significance and will remain absolutely the same. Namely, instable is the system where you do not know even the nature of the next action taken by your adversary, let alone the very act. Then every state must react by increasing the level of readiness and behave like every action can be a potential threat. Again, we are in the realm of absolute security of Hobbsean natural state. Since international relations are relations among people taken to the higher level, we can claim that unpredictability of the strategic behavior reminds us of the Latin wisdom, *homo homini lupus est*.

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<sup>283</sup> Womack 125.

<sup>284</sup> Many of those were mentioned in the previous chapter such as DIA intelligence assessments, Nuclear Posture Review or Missile Defense Review.

<sup>285</sup> Zoppo 599.



#### 4.3.4 Single domain operability

It is beyond a doubt that strategic stability is a concept tightly connected to the development, proliferation, use, and limitations of nuclear weapons. Therefore, the stability was conditioned solely by the dynamic in the nuclear domain. Relative asymmetry in the conventional domain, as well as in civilian use of space existed during the Cold war but did not have any particular influence on the overall stability of the bipolar system. Nowadays, the situation is quite different. With the asymmetry of domains introduced, we are witnessing the increasing relevance of outer space, cyber, underwater and above all resurgence of intertwined nuclear and conventional domains. In such a conjuncture, understandable is the tendency for instability since not all the great powers can be equally endowed in all of the domains.

Barry Posen argued that the US is controlling the commons such as deep seas, terminal airspace and outer space, although there is still no country with sovereignty over those<sup>286</sup>. Precisely there in multi-domain dominance lies the supremacy and preponderance of American power. On the other side, Dima Adamsky claims that cross-domain coercion is a new powerful instrument in Russian policy<sup>287</sup>. We could see that in an explicit manner during the operation in Crimea where a ubiquitous conventional force was paired with disinformation campaigns and permanent shadow of tactical nuclear escalatory threat originating both from the mainland Moscow and nearby Kaliningrad. Finally, I have already exposed at length Chinese strategies of integrated strategic deterrence and cross-domain deterrence, where it was obvious that it is an indispensable tool for a rising great power.

There are two models under which multi-domain operability brings stability. First, it is omni-domain symmetry where every great power will have equal strength in all the domains and through a complex web of deterrence, it would lead the system towards a stalemate. Second, that all the great powers have equal capabilities in a limited number of domains which is almost impossible since every country has preeminence in certain fields. Therefore, the most realistic assumption is that system will continue to function in the conditions of instability, as all the

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<sup>286</sup> Barry R. Posen, "Command of the Commons: The Military Foundation of US Hegemony," *International Security* 28(1), 2003: 7–15.

<sup>287</sup> Dmitry Adamsky, "From Moscow with coercion: Russian deterrence theory and strategic culture," *Journal of Strategic Studies* 41(1-2), 2018: 33.

previous points have also shown. The Chinese way of describing multiplicity of relevant domains is embodied in a set of mantras: lean and effective nuclear strike forces; informationized conventional operations forces; information attack and defense forces with local superiority; flexible and diverse space strength; innovatively developed integrated deterrence strength of People's War<sup>288</sup>. Therefore, the future of warfare and consequently that of strategic stability lies in a multi-platform theater of operations.

#### 4.3.5 Arms race and crisis stability

Strategic stability has traditionally relied upon the notion of arms race since it was the elite dynamics of the two blocks to achieve and take the lead within order so that they will be able to harvest certain benefits. As was shown earlier, the asymmetric triangular order does not allow arms race in that shape to occur. Instead, it pushes for a competition where might be more than one winner or no winner at all and multiple circuits as opposed to the straightforward concept. Cooperation among great powers in terms of weapons systems represents a dangerous habit. China has the following model of the acquisition of advanced weapons: "Indigenous development, foreign acquisition (especially Russian military technology), outright purchases of Western companies, and joint commercial enterprises"<sup>289</sup>. Extensive Chinese-Russian cooperation that could be seen in the acquisition of S-400 PMU systems by China but also Chinese scientific help to Russian scientists in developing the various project, can lead the US to consider changing its own procurement habits, based mostly on the indigenous production.

The latest of those tendencies have been Westinghouse nuclear deal between the US and India about the six nuclear reactors<sup>290</sup>. However, we should not overemphasize Sino-Russian cooperation since it will never happen in terms of the strategic nuclear system, the fact China got to know painfully during the dawn of their nuclear era. In any case, it is very important because common weapons systems, even of lesser importance, can lead to greater cooperation on military

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<sup>288</sup> As quoted in Chase and Chan, 124.

<sup>289</sup> As quoted in Boyd 61.

<sup>290</sup> Sanjeev Miglani and Neha Dasgupta, "Exclusive: Westinghouse set to sign pact with Indian firm for nuclear reactors during Trump visit," *Reuter*, 20 Feb. 2020, 05 May 2020, <https://www.reuters.com/article/us-india-usa-trump-westinghouse-exclusiv/exclusive-westinghouse-set-to-sign-pact-with-indian-firm-for-nuclear-reactors-during-trump-visit-idUSKBN20E1PM>

exercises, marginal infrastructure, C4ISR systems and other important features of modern warfare. The field which needs improvements in order to reduce instability is arms control. China must get the place on the table together with Russia and the United States, otherwise, the multi-domain competition to build-up military capabilities will inevitably surpass that of the Cold war.

The second part of this block is crisis stability, or in other words first-strike capability<sup>291</sup>. The things are getting complicated with the involvement of China because it still officially pursues NFU policy, but is actually employing AFU policy. The US famously is always pushing for the right to first-use in case of vital or existential threat. Russia has never denied its right to first-use, in fact, they often use nuclear weapons as a means of coercion. So, in this new outlook of the system, first-strike will need to be reformed under the conditions of absolute security. That essentially means tacitly confirming the possibility of first-use regardless of the declaratory policies. As much escalatory as this move can be, quite counterintuitively it will become the bedrock of actual stability in the new system. On the one side, it will preclude China from engaging in inadvertent escalation out of existential concerns. On the other side, the US and Russia will be more confident towards China if they can eliminate at least that degree of ambiguity from the Chinese nuclear policy.

#### **4.3.6 Systemic polarity**

The cold war system of strategic stability was functioning in the conditions of bipolarity. That outlook produced many of the positive characteristics but also constrained the order to be vitally connected to the two actors. Despite the nuclear rise of China increased the number of actors, it did not produce expected consequences. Namely, the majority of analysts would opt for multipolarity or tripolarity, but one of the premises of this paper is that it produced nonpolarity. The tendency of grouping the great powers exclusively belongs to the realm of triangularity. Correlation between polarity and number of actors was described by Haass: "Entropy dictates

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<sup>291</sup> Anya Loukianova Fink, *Crisis Stability in the Twenty-First Century* (Washington D.C.: CSIS, 2018): "During the Cold War, crisis stability was generally understood by U.S. and Soviet experts as "first strike stability" in the strategic nuclear context and, together with arms race stability, was viewed as a component of bilateral "strategic stability."

that systems consisting of a large number of actors tend toward greater randomness and disorder in the absence of external intervention"<sup>292</sup>. However, sui generis stability is possible in the conditions of nonpolarity.

Haass is talking about concerted nonpolarity as a means to achieve the simultaneous preservation of nonpolarity but also the prevention of the disintegration of the system<sup>293</sup>. This is precisely what is claimed by the stability of instability embodied in asymmetric triangularity. The system retains its characteristics while the great powers engage in a comprehensive redefining of all the key features. In such a system, according to Schweller: "Global equilibrium means maximum entropy"<sup>294</sup>. Finally, without a doubt, great powers will find a way to restore strategic stability which counts with China as an equal or almost equal member. Everything is better than the transfer of Waltzian structural anarchy to the very practical level of lack of any constraints in the period when nuclear arsenals are rising in their importance and the next system is ready to become new normalcy.

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<sup>292</sup> Haass 52.

<sup>293</sup> Haass 56.

<sup>294</sup> Schweller, Entropy 157.

## 5. Conclusion

This thesis aimed to answer the following research question: how does the Chinese nuclear rise affect strategic stability of great powers? The answer is not as straightforward as one can imagine since there are certain steps leading towards the final explanation. The ultimate conjuncture is: revisionist nature of the Chinese nuclear rise conditions the birth of an asymmetric triangular nuclear competition, consequently adjusting the characteristics of strategic stability of great powers for a different strategic environment.

Translated into the language of research aims, this thesis had two narrow and one generic goal. First, to determine the nature, potentials, and limitations of the Chinese nuclear rise. Second, to describe the appearance of the new international order and reflections on the strategic stability of great powers. Third, to indirectly challenge the overwhelming marginalization of nuclear weapons in the strategic thinking of our age.

To start from the very end, prominent authors such as John Mueller have had a long history of negating the essential importance of nuclear weapons, with arguments originating mainly from the fortunate lack of nuclear war<sup>295</sup>. However, the empirical experience is not always the best teacher. To use an inappropriate example, a mother does not need her child to be hit by the car in order to teach him to stay away from a busy street. In the case of nuclear weapons, it is even eschatologically stressed because after the first nuclear war there might be no one to tell the beautiful story about the world that experienced a transition from the realist strategic threat to the liberal democratic peace era.

Therefore, I wanted to re-emphasize the permanent presence of nuclear weapons, its operational and strategic importance. Precisely there lies an unchanged underlying logic of the Cold war, functioning in a set of different circumstances. Every sane person has to acknowledge that the end of the Cold war resulted in certain shifts, changing priorities and models of state interactions. That was the reason for many to claim the uttermost irrelevance of strategic threat and to declare that in the future strategy will be made under the umbrella of economic opportunities and

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<sup>295</sup> John Mueller, "The Essential Irrelevance of Nuclear Weapons: Stability in the Postwar World," *International Security* 13(2), 1988: 55-79. Look as well at: James Joyner, Are Nuclear Weapons Obsolete? *Atlantic Council*, 05. Mar 2010; 09. May 2020. <https://atlanticcouncil.org/blogs/new-atlanticist/are-nuclear-weapons-obsolete/>.

technological advancements<sup>296</sup>. The critical issue often disregarded by the so-called optimists is that despite the disappearance of the USSR and change of the international system, the old threats remained active and new ones, even more vicious started appearing. Therefore, the manifest appearances changed radically (deterritorialization, risk society, invisible threats, war on drugs, formally enlightening tendencies such as human security as well), but the underlying logic remained intact. To move it a bit closer to the main topic, Chinese comprehensive rise has caused great instabilities within a system. Nevertheless, it did not change the paradigm of international relations, but the very surface level by constructing new recurring patterns of behavior. Throwing the point well before it would logically go: it did not negate the essence of stability but found a new way to achieve it – here labeled as stability of instability.

It is indisputable that the Chinese rise in general taken a load of attention from both academics and practitioners. This work aimed to bridge the existing gap in the domain of nuclear rise. It is not to say that there is no literature on Chinese nuclear modernization and development, quite the contrary. But often it is put in the secondary sport, under the shadow of economic initiatives such as Belt and Road, and almost never connected meaningfully to the outlook of international relations. Therefore, I wanted to investigate how the incumbent order appropriates Chinese nuclear rise, shapes it in order to build an appropriate reaction. At the same time, the system is being shaped by it. In a mutually constitutive process, the new order is being born, while Chinese nuclear behavior for the first time is present in the main state of decision-making processes. It is important to note that this thesis provided an overview of the nature, potentials and limitations of the Chinese nuclear rise.

In the beginning, it is obvious that China is not satisfied with the incumbent order in which it is strategically lagging far behind the United States and Russia despite its unprecedented economic growth. Following Schweller's distinction, the Chinese nuclear rise is described as revisionist. In other words, it is oriented towards overthrowing the existing systemic structures, or at least changing the leadership and radically adjusting them for its own needs. This tendency could be seen in the sweeping PLA reforms under Xi Jinping, in terms of hierarchy and weapons systems. The former could be seen in elevating the Second Artillery Force which controlled the nuclear

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<sup>296</sup> Look at: Peter Dombrowski and Eugene Gholz, *Buying Military Transformation: Technological Innovation and the Defense Industry* (New York, NY: Columbia University Press, 2006).

arsenal into an independent military branch to ensure and increase its operational independence and capabilities. Not the less, integrating other military branches into an American-like operational theater concept is leading PLA towards the status of an advanced modern military. Under Xi, China engaged in a comprehensive modernization of its nuclear arsenal. DF-41 is considered to be among the top ICBMs; planned JL-3 SLBM together with the type-096 SSBN submarine represents the first credible Chinese sea-based deterrent; efforts are made to produce an indigenous long-range bomber as well. A range of other cousin weapon systems is being procured such as vehement CJ series of cruise missiles or DF-ZF hypersonic glide vehicle. Featuring infrastructure is being improved and fused into a modern C4I2SR concept.

All of those efforts are reflected in the doctrinal and postural shifts and that is the domain in which it is easy to trace Chinese revisionism. Traditionally defined as defensive, lean and effective nuclear force respecting the strict no-first-use and minimum deterrence policies, Chinese nuclear posture experienced certain transformations. In the third chapter, I proved that no-first-use is substituted by ambiguous-first-use or even launch-on-warning posture and minimum deterrence is becoming either limited or flexible deterrence. Strategic defensivism is denied by the signals of warfighting strategies. Finally, predictable Chinese strategy is bringing in the instability as a bargaining chip until it increases capabilities to the sufficient level for declaratory offensive strategies.

When it comes to further potentials of Chinese nuclear rise, they are multiple. First, increasing the military budget described in the first chapter will be translated into the modernization of weapons systems, but also to make the existing arsenal more robust. China is indeed gradually increasing its number of warheads, especially at the intercontinental range. Second, endless are possibilities for utilization of emerging domains such as ASAT weapons and hypersonic vehicles. Those are the areas where China will be seeking its decisive advantage in the new system. Third, increasing the level of strategic ambiguity while cautiously decreasing the nuclear threshold can enable China to progress in the long-term without being essentially endangered by the other actors. Fourth, increased focus on the near abroad through the nuclear regionalization provides a window of opportunity for China to take control of South East Asia and disputed seas,

consequently paving a way for a Sino-centric Asia<sup>297</sup>. Chinese strategy will largely be dependent on the level of accommodation laid out by other great powers.

On the other side, there is an inherent limitation of the Chinese nuclear rise. First and foremost is an objective impossibility for China to ever achieve quantitative nuclear parity with the US and Russia, thereby causing constant asymmetry and the need to find out other advantages in order to neutralize the existing one. Moreover, a proclaimed defensive strategy obliges China not to break it and future transition towards altering it will require a painstaking set of compromises. The domestic constraint should not be neglected as well because Chinese economic growth is expected to slow down, leaving a vacuum for other areas to be financed, rather than military. Eventual leadership change or domestic unrest can lead to significant declination from the current pathway.

All of the aforementioned leads to the nascent order characterized by the radically changed interstate relations and the omnipresent cloud of strategic threat. Three are the distinct features here. In the beginning, asymmetry of relative state power is being transformed into the asymmetry of domains at the disposal of a certain actor. In the real world, it is becoming increasingly hard to balance against even the smallest country in the world if it has advantages in other domains. In the case of great powers, this would mean that China can deny the quantitative discrepancy of nuclear weapons through advancements of space and cyber domains. Therefore the new system becomes a game of domain dependency and the ability of others to utilize it. After that, systemic polarity withers away to leave space for triangular order where the three great powers will be centers of international dynamics. Great powers are still far from forming particular blocs, attracting alliances and being bandwagons as was seen during the Cold war. Nuclear behavior in the conditions of triangularity is dancing on the edge of escalation since a legitimate action between the two actors can mean an unacceptable risk for the third. Consequently, the superpowers will need to find new patterns of cooperation, this time including China at the highest political tables. In the end, the arms race does not exist anymore in the classical meaning of the word. It has been substituted with a multifaceted competition where might be three winners or no winners at all, characterized by an array of circuits instead of a straightforward path. In such a turmoil, the Chinese nuclear strategy seems to be the most viable

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<sup>297</sup> Schneider 198.



one since Russia and the US will need to adapt to the new conditions where the MAD logic is not the only game in town.

Strategic stability is one of the redefined concepts in the new strategic circumstances. This thesis provided an overview of the six main changes. Second-strike capability is being transformed into complex systems of asymmetric interdependence or triangular second-strike deterrence. The notion of mutual vulnerability which was the cornerstone of US-Russia relations must result in a return to the absolute security posture. As was already said, predictability is slowly disappearing, leaving ambiguity and uncertainty as new normalcy. Asymmetry of domains conditions single-domain operability to become obsolete and multi-domain or even omni-domain strategies are an appropriate reaction. Having in mind the Chinese nuclear rise, triangular first-strike relations will need to be established with the particular escalatory potential, negating the premises of crisis stability. Arms race or competition need to include China in decision-making and arms control processes if uncontrolled skyrocket of military expenditure is to be avoided. Finally, Cold war bipolarity is being substituted with a non-polar triangular outlook, where structural entropy is a governing principle paradoxically precluding the disintegration of the system.

The connection between the Chinese nuclear rise and the strategic stability of great powers is not the most obvious one. It requires a level of abstraction and a deliberately reckless realist approach in order to wake up liberal academia from a dogmatic Kantian slumber, but also to suggest to policymakers that something huge is passing under their radar. Without the ambition to claim paradigm shift or the new era in international relations, this thesis aimed to formulate the phenomena already being shaped. My wish was to show the model of how great powers seek to achieve stability within a set of new circumstances. The answer lies in the most abstract of all the formulations presented in these pages: stability must be found through the glasses of instability.

In the end, describing nuclear war, Jacques Derrida wrote: "It would be a war without a name, a nameless war, for it would no longer share even the name of war with other events of the same type, of the same family. Beyond all genealogy, a nameless war in the name of the name"<sup>298</sup>. The unspeakable, the untranslatable, maybe ultimately non-describable, the nuclear war stands at the

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<sup>298</sup> Jacques Derrida, "No Apocalypse, Not Now (Full Speed Ahead, Seven Missiles, Seven Missives)," *Diacritics* 14(2), 1984: 31.

limit of the science of international relations. Therefore, this paper in making a diagnosis and prescribing a preliminary medicine opens up a way for further research to be done on the same topic. A great burden of responsibility will be on those who will investigate the nature of the system, trying to predict its future, but also find new shapes of stability and models to accommodate various divergent tendencies. Christopher Cocker said: "If the United States and China continue to convince themselves that war is too 'improbable' to take seriously, it is not only they but the rest of the world that may ultimately pay the price"<sup>299</sup>. Let this thesis be an early warning, hopefully, the last one needed.

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<sup>299</sup> Cocker 181.

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