

CONSIDERATIONS REGARDING THE CONVENTIONAL AND NUCLEAR ARMS RACE

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ABSTRACT:

THE MILITARY ARSENALS OF STATES GIVE THEM CHANCES OR NOT TO WIN IN A POSSIBLE ARMED CONFLICT WITH A RIVAL STATE, THIS BEING UNDERSTOOD AS A DYNAMIC AND COMPLEX PHENOMENON LINKED TO THE WIDE RANGE OF FACTORS INCLUDING: ECONOMIC STRENGTH, INTERNAL POLICIES, ALLIANCES, STRATEGIC BALANCE, ETC.

A SIMPLE COMPARISON OF THE SPECIFIC REGIONAL ARMING RACES BETWEEN THE MIDDLE EAST, EAST ASIA, SOUTH AMERICA AND AFRICA DECIPHER SIMILARITIES AND DIFFERENCES. IN THE NON-EURO-ATLANTIC SPACES, MANY COUNTRIES ARE DEVELOPING THEIR DEFENSE INDUSTRIES IN ORDER TO ACHIEVE A CONSISTENT LEVEL WITH THE EURO-ATLANTIC STATES.

IN THE PAST 25 YEARS, THE EURO-ATLANTIC AND THE PACIFIC REGIONS HAVE EVOLVED IN A CONTRADICTIONARY MANOR, IN A SPACE PROCEEDING WITH MASSIVE DISCOUNTS WHILE IN OTHER SPACES GOING ON TO ACCELERATED BUILDUP OF ARMAMENTS, EXPLAINED ALSO BY THE LACK OF SECURITY NEGOTIATIONS.

STUDIES DEDICATED TO THE ARMING RACE CAN BE SORTED BY THEIR PRIMARY FACTOR, AS FOLLOWS (1) ALL STATES ARE COMPETING WITH EACH OTHER ALL THE TIME, (2) THE INFLUENCE OF THE ARMING COMPETITION ON ESCALATION OF AN ARMED CONFLICT.

THE CONCEPTUALIZATION AND MEASUREMENT REGARDING THE RACE OF ARMING, WHICH IS DEPENDENT ON THE SYSTEMATIZATION OF DATA, SUFFERED FROM THE LACK OF A MODEL, THE LACK OF DEVELOPMENT OF THEORETICAL MATERIAL EMPIRICAL. AFTER THE COLD WAR, IN RESEARCH FIELD OF THE ARMING RACE EMERGED ONLY LITTLE PROGRESS.

A TERRESTRIAL ARMS RACE BETWEEN US AND CHINA IS UNLIKELY IN THE SHORT TERM BUT AN ARMS RACE IN SPACE IS DIFFICULT TO AVOID.

A PROPOSAL FOR AN AGREEMENT ON "ALL INTENTIONAL COLLISIONS OF OBJECTS ABOVE THE ATMOSPHERE" AND A MORATORIUM ON TESTING BAN EXTRA ATMOSPHERIC INSTRUMENTS CAN DISCOURAGE ARMS RACE IN SPACE.

KEY WORDS: THE ARMS RACE, THE MILITARY ARSENALS, THE MILITARY EXPENSES, NUCLEAR WEAPONS,

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THE MILITARY ARSENALS AND THE MILITARY EXPENSIVE

The formulation and development of concepts and theories and laying them out in the international documents with significant relevance in the field of military politics, adapt to the socio-economic relations, that are strongly influenced by the rapports of powers.

The military arsenals (organized by armament systems) represent the key component of the arming race (by types of armament), together with manpower². The main systems of armament refer to: the strategic interception of tactical ballistic missiles, tactical airplanes, tanks, anti-tank missiles, strategic bombers³. The military arsenals of states give them chances or not to win in a possible armed conflict with a rival state, this being understood as a dynamic and complex phenomenon linked to the wide range of factors including: economic strength, internal policies, alliances, strategic balance, etc. Military arsenals are one of the necessarily conditions of an international armed conflict⁴. Reference definitions of the arms race operate with the notions of arsenal, mutual reasoning, and adversity relations based on the interaction between two or more states, seeking a balance on the level achieved by the rival⁵.

The military expenses of the states are the most used indicator in the evaluation of the arming race, even though there can be serious distortions in their structure, depending on the own interest. The arms race is applicable for the same type of military systems (nuclear offensive or discouragement).

The arms race is the layout for the escalating international crisis and armed conflicts. The concept of the race of arming is strongly connected with the concept of rivalry, because of the high risks of provoking an armed face-off, caused by a wrong decision.⁶

As specialists bring forward⁷, the competition of arming – leaving aside the high costs that it requires – has as a starting point the perception of a major threat, an uncertainty. In the technical literature there is a demand for systematic and quantitative tests regarding the causes, respectively the specific of the race, the uncertainty, especially in the cases of territorial rivalries.

² "After all, wars are not fought with currency but with weapons and people." Bolks Sean and Richard J. Stoll, "The Arms Acquisition Process: The Effect of Internal and External Constraints on Arms Race Dynamics," *Journal of Conflict Resolution*, Vol. 44, 2000, pp. 580-603.

³ McCubbins Mathew D., "Policy Components of Arms Competition," *American Journal of Political Science*, Vol. 27, 1983, pp. 385-406. Strategic interceptors, tactical S.A.M, tactical aircraft, tanks, antitank missiles, and strategic bombers.

⁴ *Ibidem*, p. 68.

⁵ "An arms race is a bilateral (dyadic) interaction in which both states consciously and observably increase their level of weapons stockpiles over an extended period of time against one another due to some underlying animosity over an issue/s. An arms race therefore involves reciprocal motive, increased arming, and time." Marin Victor Claudio, *op. cit.*, p. 28. "Two or more parties perceiving themselves to be in an adversary relationship, who are increasing or improving their armaments at a rapid rate and restructuring their respective military postures with a general attention to the past, current, and anticipated military and political behavior of the other parties." Gray, Colin S., "The Arms Race Phenomenon," *World Politics*, Vol. 24, No.1, 1971. p. 40. Schelling and Halperin (1961) offer the following definition: "Arms Race' refers to the interaction between two or more adversaries' military programs, to a tendency for each side's program to respond to what the other is doing. The arms level that each is willing to support depends on the level the other side has reached." Schelling, Thomas C. and Morton H. Halperin, *Strategy and Arms Control*, Potomac Books, 1961, p. 34.

⁶ [...] countering threat of a possible arms race can't be achieved by increasing armaments, but rather by investing in non-military instruments to boost political, economic and social development. Băhneanu Cristian, *Cursa înarmărilor în arcul de insecuritate din vecinătatea estică a Uniunii Europene: Consecințe pentru România*, Editura Universității Naționale de Apărare "Carol I", București, 2010, p. 4.

⁷ Rider Toby, "Uncertainty, Salient Stakes, and the Causes of Conventional Arms Races," *International Studies Quarterly*, Blackwell Publishers, Malden MA Vol. 57/3, 2013, pp. 580-591.

A simple comparison of the specific regional arming races between the Middle East, East Asia, South America and Africa decipher similarities and differences.

In the non-Euro-Atlantic spaces, many countries are developing their defense industries in order to achieve a consistent level with the Euro-Atlantic states.

If East Asia supported begins a massive import of military technology and military development of national industries in the Middle East, South America and Africa are imported from major powers military systems producing military equipment.

In the last quarter century, the lack of negotiations on arms control in non-Euro-Atlantic space allows and feeds the accelerated arming race, the most active being the major Asian powers, especially those bordering the Pacific⁸.

The arming race in the Asian region adjacent to the Pacific acquirers an significant extension and a rapid growing rate: purchase of aircraft performance (China Su-27, Taiwan F-16 and the design and production of indigenous aircrafts - China, Japan, Taiwan), development of national military capabilities, especially High-tech (Indonesia, Japan, Malaysia, Singapore, Thailand, South Korea and North Korea), communication and surveillance (Japan, Taiwan, Singapore and South Korea).

In the past 25 years, the Euro-Atlantic and the Pacific regions have evolved in a contradictory manor, in a space proceeding with massive discounts while in other spaces going on to accelerated buildup of armaments, explained also by the lack of security negotiations.

THE THEORY OF TWO NATIONS

In international relations there can be no harmony⁹, but problems arising from interactions between countries, that pending answers; answers can be accompanied by “concern”, by “serious tensions” and “confrontation.” Confrontations and disagreements usually precede an arming race that could escalate into an armed conflict¹⁰.

Studies dedicated to the arming race can be sorted by their primary factor, as follows (1) all states are competing with each other all the time, (2) the influence of the arming competition on escalation of an armed conflict. According to the author, contentious issues as a starting point of the arming race and the proliferation of tension between states are essential¹¹.

Learning the precepts of realism in the study of the arming race and the conflict means admission of three theoretical shortcomings. States have to always be afraid of other states, due to the anarchic international environment they have to consider other countries are “threats” or “enemies” to survive and have to have a strategy of arming that other states will follow¹².

⁸ Runkle Benjamin Gordon, “Symptom or Disease? Arms Races and the Causes of War,” *The Humanities and Social Sciences*, Vol. 64/5, Ann Arbor, 2003, pp. 12-14.

⁹ “Harmony is apolitical. No communication is necessary, and no influence need be exercised.” Keohane Robert, *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton, 1984, Princeton University Press, pp. 48-55.

¹⁰ Hensel Paul R., Sara McLaughlin Mitchell, Thomas E. Sowers II, and Clayton L. Thyne, “Bones of Contention: Comparing Territorial, Maritime, and River Issues,” *Journal of Conflict Resolution*, Vol. 52, 2008, pp. 117-143.

¹¹ Marin Victor Claudio, *op. cit.*, pp. 41-44.

¹² It is a fact most states, most of the time have no reason to compete (arm) against one another. This means one of the central assumptions of realism - that states must assume the worst intentions about others - is in direct contradiction to what is borne out in the real world everyday. Marin Victor Claudio, *op. cit.*, pp. 45-46.

In 1958, there is made a distinction between quantitative and qualitative arming race, the majority opting for quantitative rather than qualitative, considering that it is the prerogative of the superpowers¹³.

The Richardson model synthesizes through mathematical ratios the arming race as an international interaction, based on the behavior and perceptions of the states concerning their military arsenals shaped by a number of parameters (wear, maintenance costs, development)¹⁴.

The theory of two nations (The Richardson Linear Theory of Two Nations)

$$dx / dt = ax + g ky -$$

$$dy / dt = W - j3y + h$$

x = modification arsenal

t = duration

d = function

y = threat

k = coefficient of Defense

g = parameter correlated with the state opponent.

where are the change in x's arms over time t is a function of the menaces posed by y, some positive defense coefficient k, some negative constant or representing the fatigue and costs of maintaining defenses, and some parameter g symbolizing the grievances held against the opposing state.

The relationship of Richardson's quantitative model of the arming race (the subsequent improvements) with the triggering of an international conflict was not verified by the developments that confirm a direct and automatic liaison¹⁵. The technical literature dedicated to the relationship between the arming race and the triggering of an international conflict, having as a basis the Richardson's, is at least inconsistent, even by adding new parameters.¹⁶

Richardson's model is enriched by adding a parameter of dynamic mutual stimulation (action-reaction, positive feedback)¹⁷, according to which each increases quantitative their arsenal to be larger than the other state, followed by the reaction of the latter. Another parameter introduced by the same author is self-stimulation determined by domestic factors. Analysis of US-Soviet arming race in the period 1945-1975 by the criterion of defense spending is driven by both dynamic and stimulating mutual self-stimulation¹⁸.

Along the way, the model is enriched by reporting defense spending to GDP and introducing variables and economic techniques of statistical factors and a data analysis program (COW)¹⁹.

¹³ "... replacing its existing forms of military force (normally weapons systems) with new and more effective forms of force." Huntington Samuel P., "Arms Races: Prerequisites and Results," in *Public Policy*, eds. Carl J. Friedrich and Seymour E. Harris. Cambridge, Mass. Harvard University Press, 1958, p. 24.

¹⁴ "In an arms race, the opposing sides try, with some success, to maintain a balance of power...the ratio, or the difference, between their armaments remains fairly stably near to a constant." Richardson Lewis F., *Arms and Insecurity*, Pacific Grove, CA: Boxwood, 1960, p. 23.

¹⁵ Anderton Charles H., "Arms Race Modeling: Problems and Prospects," *Journal of Conflict Resolution*, Vol. 2, 1989, pp. 346-67.

¹⁶ Marin Victor Claudio, *op. cit.*, p. 63.

¹⁷ Lambelet Jean-Christian and Urs Luterbacher, "Conflicts, Arms Races, and War: A Synthetic Approach," in *Peace, Defence, and Economic Analysis*, eds. Christian Schmidt and Frank Blackaby. London: Macmillan Press, 1987, p. 49.

¹⁸ Lambelet Jean-Christian and Urs Luterbacher, *op. cit.*, p. 62.

¹⁹ Correlates of War data project - COW. Vezi Sarkees Meredith Reid, "The Correlates of War Data on War: An Update to 1997," *Conflict Management and Peace Science*, Vol. 18, 2000, pp. 123-144.

Models based on the analysis of the arming race and of greater importance given to quantitative differences correlated with the onset of conflict were presented also by other authors²⁰, but the results were inconclusive, being verified only partly²¹.

Building an index of the arming race, based on the analysis of about 100 interstate armed conflicts, of which 90 were preceded by arming races, shaping tense situations between states²², presents several ambiguities index being considered “a simple multiplicative function”²³ opposed by an improved version of the COW, coming down from 90% to 25% of disputes involving an arms race escalates into armed conflict²⁴.

From analysis disputes between the great powers in period 1816-1980, one can talk about that an arming race when military spending over the last decade before the dispute are significantly higher than normal, but one is unable to speak of a link between the arming race and the triggering of an international armed conflict²⁵.

Studies on the arms race as soon as the Cold War were no longer topical, registering only improve code quality data regarding arsenals by focusing on the criterion of “strategic rival”²⁶, replacing the criterion of “traditional rivalry” leaving to interpretation as the assumption of the arming race as a factor favoring the transformation of a dispute in international armed conflict.

The technical literature tends to identify the external causes of threat, ignoring domestic cases - adopting unfit policies - treating separate the causes and consequences. Two situations can be typical when a state engages in an arms race as an optimal solution with external cause and the case when a state engages in an arms race for domestic reasons, having negative consequences²⁷.

The study of the arming race is circumscribed by the Richardson analysis model - the most used model in the technical literature - but the only one. Along the way, the Richardson model receives successive improvement. According to an author, all classical models of analysis of the arming race must be adapted to the specific relations between nuclear superpowers²⁸.

According to an author, there is a relationship between arming and war, through the effects of militarization on the state mechanism of decision; militarization as an antechamber of war can be generated by two external circumstances, or by the existence of an alliance offensive or increased speed of the spiral of arming. Even if armaments are a cause for war, in rare situations, the control of armament focused on demilitarization in the context of the arming race is the ideal

²⁰ Isard Walter Charles H. Anderton, “Arms Race Models: A Survey and Synthesis,” *Conflict Management and Peace Science*, Vol. 8, 1985, pp. 27-98.

²¹ Sample Susan, “Military Buildups, War, and Realpolitik: A Multivariate Model,” *Journal of Conflict Resolution*, Vol. 42, 1998, pp. 156-75.

²² Wallace Michael D., “Arms Races and Escalation: Some New Evidence,” *Journal of Conflict Resolution*, Vol. 23, 1979, pp. 3-16.

²³ Diehl Paul F. and Gary Goertz, *War and Peace in International Rivalry*, University of Michigan Press, Ann Arbor, 2000, pp. 31-39.

²⁴ Diehl Paul F. and Gary Goertz, *op. cit.*, p. 208.

²⁵ Horn Michael D., “Arms Races and the International System,” in *Department of Political Science*, University of Rochester, University of Rochester, Rochester, NY, 1987, p. 16.

²⁶ Thompson William R., “Identifying Rivals and Rivalries in World Politics,” *International Studies Quarterly*, Vol. 45, 2001, pp. 557-86. Mărcău Flavius Cristian, Ina Raluca Tomescu, “Coordinates of NATO – EU cooperation”, in proceedings *Strategic changes in Security and International Relations*, 2014, pp. 258-265.

²⁷ Glaser Charles, “The Causes and Consequences of Arms Races,” *Annual Review of Political Science*, Vol. 3, 2000, pp. 251-276.

²⁸ Intriligator M., Brito D., Gleditsch N., Njolstad O., *Arms race modeling: A reconsideration. arms races - technological and political dynamics*, Sage publications, Newbury Park, CA, 1990. For math models see Lewis Fry Richardson and Wiberg H., Gleditsch N., Njolstad O., *Arms races, formal models, and quantitative tests. Arms races - technological and political dynamics*, Sage publications, Newbury Park, CA, 1990.

solution²⁹. The concept of the arming race (conventional and nuclear) is shaped by the dynamics of arms control, the influence of the dynamics of technological change, the political dynamics (bureaucracy and military industrial complexes) and the results of research in the field³⁰.

The trend of increasing the activities of arming is dependent on both the internal and external factors - deterrence, socio-political interests, technological advantage, organizational imperatives and psychosocial strategies. These factors play major roles in certain circumstances and in unbalanced power relations.

Outside the Euro-Atlantic area, the applications of this concept in other regions have led to inconclusive results.

A “CLASSICAL” ARMING RACE

The nuclear arming race between the US and Russia has been focused on nuclear arsenals, specifically on ensuring first-strike and counter shots capabilities, underling the importance of knowing the exact number of the opponent’s missiles.

If in the past the US had a considerable superiority that didn’t allow China to do the first strike, now the Chinese nuclear strategy aims to ensure its capability against nuclear strike, maintaining ambiguity on the first blow. The Chinese strategy does not exclude the risk of using nuclear weapons in a US-China crisis³¹.

Studies dedicated to the race of arming pursue the declaration of the relationship between itself and the escalation of conflict in the form of armed violence, mostly directed towards relations between the major powers, although it should also take into consideration the minor powers (the majority of states in the international system) as well as small states³².

The conceptualization and measurement regarding the race of arming, which is dependent on the systematization of data, suffered from the lack of a model, the lack of development of theoretical material empirical which should have as a reference the following ideas: (1) theoretical orientation based on the evaluation of international relations, a wide theoretical framework according to which the arming race leads to dangerous conflicts; (2) an arming pattern defined by litigious relations, increasing the mutual arsenals and longtime development; (3) the arming race is correlated by conflict³³.

Since the 60s, the study of the arms race developed several perspectives, including the perspective of symmetry and the action-reaction model, calibrating a number of methodologies for analyzing the types and generations of armaments.

The study of the relationship between war and the arms race shows that there are some limitations that determine two extreme assumptions: an asymmetric arms race which ends with

²⁹ See Pakistanul (1965 war), India (1971 war), Israel (1956 war), Israel (1967 war), Egipt (1971 war), Iran (1969-1975 war), Iraq (1980 war). Schofield Julian, "Arms Races, Militarization, and War," *The Humanities and Social Sciences*, 2002, Vol. 62/12.

³⁰ Gleditsch N., Njolstad O., *Arms races - technological and political dynamics*, Sage publications, Newbury Park, CA, 1990, pp. 21-27.

³¹ Cunningham, Fiona S. and M. T. Fravel. "Assuring Assured Retaliation: China's Nuclear Posture and U.S.- China Strategic Stability," *International Security*, Vol. 40, no. 2, Fall, 2015, MIT Press Journals, Cambridge, pp. 7-47.

³² Diehl Paul F. and Mark J. C. Crescenzi, "Reconfiguring the Arms Race War Debate," *Journal of Peace Research*, 35, 1998, pp. 111-8.

³³ Marin Victor Claudio, *Arms racing and conflict in the Third World: 1970-2000*, Ann Arbor, ProQuest Dissertations Publishing, 2010, pp. 1-2.

war and the second hypothesis which states that the arms race and war are two completely independent phenomena³⁴.

With the Cold War, the arms race becomes paradoxical through opposite developments from a regional perspective, knowing a slowdown in some areas while in other regional areas there can be seen an acceleration. Thus, while the Euro-Atlantic area through agreements long negotiated starts a rapid reduction in military spending, in the Middle East and East Asia, in the absence of international regulations and regional agreements not only the military spending, industrial development of the national military but also the procurement of military equipment increases significantly³⁵.

According to an author the arming race may escalate in war following the hypothesis “Windows-Militarism,” according to which, when a window of opportunity is created the state can launch a preventive war militarized. Applying the algorithm of this analysis hypothesis provides a high degree of prediction escalation / non-escalation of the war (87.5%) in the study of the universe of the arming race between powers during 1815-1989³⁶.

From the perspective of defeatist realism, the effects of political decisions in favor of the involvement in an arming race that affect the security of the state; it is considered that the existence of an external threat makes engaging in an arming race to be correct and necessary. Involvement in a spiral of an arming race without substantial motivation brings a disservice to security. The ambition of a state to perpetuate military superiority affects safety and increases the likelihood of a war outbreak³⁷.

The relationship between the arming race and war, and highlights the rapport of the effects of escalation and deterrence, deterrence in armed disputes in “strategic rivalries” between 1816-1993³⁸. In any case, arming races and boosts the triggering of disputes and wars³⁹.

A traditionalist perspective on international relations, the deterring of 'rival powers'⁴⁰ gives reasons for engaging in an arming race, even if it is accompanied by negative consequences including financing costs. According to the author, a state engages in an arms competition knowing the very high costs, if there are significant risks relating to the integrity of its territory⁴¹.

The relationship between the arming race and the transforming of a dispute into an armed conflict is connected with the idea that strengthening military discourages “rival powers” to trigger an armed conflict (the peace through strength argument).

³⁴ Lambelet John, “Do arms races lead to war?,” *Journal of peace resolution*, Vol.12/2, 1990, pp. 123-128.

³⁵ Klare Michael, “The next great arms race,” *Foreign Affairs*, Vol. 72/3, Summer 1993, p. 136.

³⁶ Cases that are being analyzed: the 1872-1893 German-Franco arms race, the 1910-1914 German-Franco/Russian arms race, and the 1916-1922 and 1934-1941 U.S.-Japanese naval races. Runkle Benjamin Gordon, “Symptom or Disease? Arms Races and the Causes of War,” *The Humanities and Social Sciences*, Vol. 64/5, , Ann Arbor, 2003. Although, the author highlights that “It is possible that more words have been written about arms races than the number of bullets fired in the wars that followed them,” but also that “If there is any consensus among arms race studies, it is that some arms races lead to war and some do not.”

³⁷ Glaser Charles L., “When Are Arms Races Dangerous? Rational versus Suboptimal Arming,” *International Security*, Vol. 28/4, 2004, pp. 44-84.

³⁸ Douglas Gibler, Rider Toby, Hutchison Marc, “Taking Arms against a Sea of Troubles: Conventional Arms Races during Periods of Rivalry,” *Journal of Peace Research*, Vol. 42/2, 2005, pp. 131-147.

³⁹ Hensel Paul R., “Charting a Course to Conflict: Territorial Issues and Interstate Conflict, 1816-1992,” *Conflict Management and Peace Science*, Vol. 15, 1996, pp. 43-73.

⁴⁰ Vasquez John A., “Distinguishing Rivals That Go To War From Those That Do Not: A Quantitative Comparative Case Study of the Two Paths to War,” *International Studies Quarterly*, Vol. 40, 1996, pp. 531-558.

⁴¹ Rider Toby, “Understanding Arms Race Onset: Rivalry, Threat, and Territorial Competition,” *The Journal of Politics*, Cambridge University Press, New York NY, Vol. 71/2, 2009, pp. 693-703.

After the Cold War, in research field of the arming race emerged only little progress. Starting from the assumption that the arming race remains the centerpiece of the outbreak of armed conflicts and wars between states, the author analyzes the minor powers in three geographical areas: Latin America, Africa and Middle East during 1970-2000 by using the existing military arsenals and not military spending in determining the parameters of regional arming races.⁴² According to the observations done by the author, the arming race determines the triggering of international conflicts, certain types of armaments supporting a predisposition to trigger a conflict in this arming race in the branch of the air force against the land forces and naval accompanied by a higher probability of triggering a conflict.⁴³

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In a study on the relationship between war and the arming race there are detected “rivalry”⁴⁴ attributes, in the broader framework of competitions between rival and non-rival populations in the period 1816-2000. According to the study, an arming race occurs most often in the context of long-standing rivalry, especially in middle and final stages of rivalry; rivalries which have lived war before are more susceptible to the arming race than the rivalries that have not known war; The arms race unleashed in the final stage of rivalry is more likely to trigger a war⁴⁵.

A “classical” arming race or at least the most studied one is the one between USA and USSR deployed along half a century particularly on nuclear landing in full “Cold War”; in the nineteenth century, the European powers are engaged in an arms race, particularly in the naval field, but also between the two world wars⁴⁶.

In 2007, Russia accuses US of initiating a new arming race through the deployment of defensive missiles.

Relations between three superpowers - China, Russia and the US - as key players of the international system depend on the characteristics of their military arsenals, diplomatic relations, a palette of peacekeeping measures and the speed of finding solutions in tense situations. The combination of these factors determine whether or not an outbreak of the arming race will occur, that in turn induce major geopolitical reconfiguration in the balance of global power.

⁴² Marin Victor Claudio, *Arms racing and conflict in the Third World: 1970-2000*, Ann Arbor, ProQuest Dissertations Publishing, 2010, pp. 5-14.

⁴³ *Ibidem*.

⁴⁴ Rider Toby, Findley Michael, Diehl Paul, “Just part of the game? Arms races, rivalry, and war,” *Journal of Peace Research*, Vol. 48/1 Sage Publications, London UK, 2011. pp. 85-100.

⁴⁵ Valeriano Brandon, “The Tragedy of Offensive Realism: Testing Aggressive Power Politics Models,” *International Interactions*, Vol. 35, 2009, pp. 179-206.

⁴⁶ Lachowski Zdzislaw, “Half-century of Arms Control: A Tentative Score Sheet,” *The Polish Quarterly of International Affairs*, Vo.19/4, 2010, Polish Institute of International Affairs, pp. 1-40.

The system of international relations is defined by the role of major powers, the future being under the mark of the binomial US-China and by Russia's position as a military superpower, especially regarding the global balance of military power, which entails or not the military superiority and uses arms in any open armed conflict⁴⁷.

The trend of reordering the international relations by shifting from unipolarity to multipolarism, undertakes to study the roles played by minor powers but also small states. If minor powers engaged in the arming race it is important to note if they become inter-state conflicts⁴⁸.

According to an author, research into the arming race should focus on arming races amongst minor powers of the international system, that is being subjected to globalization⁴⁹, even if a number of concepts (the theory of the transition of power, hegemonic stability, the paradigms of the interactions between the major powers) are seriously affected.

In several regions of the planet the rate of military spending in the national budgets of minor powers are consistent with those of the great powers, also being able to talk about similar behaviors to those of the great powers, the arming competition between minor powers having triggered a significant destructive potential⁵⁰.

A FUTURE ARMS RACE IN SPACE

Even though the US currently controls outer space⁵¹, according to the author, a future arms race in space lasting US-China with very high costs and extremely dangerous consequences is very likely⁵².

The safety concept assumes that in the near future space war and space conflicts are inevitable, especially since the great powers have placed weapons systems in space.

In 2011, there were 957 space satellites operating (45.6% US 10.4 7.2 Russian and Chinese, according to the Union of Concerned Scientists) USA having undisputed supremacy⁵³.

A terrestrial arms race between US and China is unlikely in the short term but an arms race in space is difficult to avoid⁵⁴; there were several arguments proposed, a limited American presence, and an increased vulnerability to other nations giving the dependence of spatial objects to terrestrial activities, asymmetrical warfare is very attractive to US adversaries.

From another perspective, the limited possibilities of spatial objects certainly attract increased vulnerability in the face of sabotage, seizing attacks than terrestrial targets. An engagement in a race to space militarization favors China, given its financial and technological

⁴⁷ Valeriano Brandon, *op. cit.*, pp. 204.

⁴⁸ Douglas Gibling, Toby Rider and Marc Hutchison, "Taking Arms Against a Sea of Troubles: Interdependent Racing and the Likelihood of Conflict in Rival States," *Journal of Peace Research*, Vol. 42, 2005, pp. 131-47.

⁴⁹ Even though tensions between the United States and Russia have fluctuated from relatively good to relatively poor the prospect of any serious militarized conflict remains quite low. Marin Victor Claudio, *op. cit.*, pp. 27-28.

⁵⁰ Sample Susan, "The Outcomes of Military Buildups: Minor States vs. Major Powers," *Journal of Peace Research*, Vol. 39, 2002, pp. 669-91.

⁵¹ Who controls low-earth orbit controls near-earth space. Who controls near-Earth space dominates Terra [Earth and atmosphere]. Who dominates Terra dominates the destiny of humankind. . . . The United States is the morally superior choice to seize and control space." Dolman Everett C., *Astropolitik: Classical Geopolitics in the Space Age*, Frank Cass, London, 2002.

⁵² Moore Gregory J., "An International Relations Perspective on the Science, Politics, and Potential of an Extraterrestrial Sino-US Arms Race," *Asian Perspective*, Vol. 35, no. 4, 2011, pp. 643-658.

⁵³ US - unmanned aerial vehicles – UAVs with Global Positioning System (GPS) satellite-guided, Chine Beidou System (GPS). Moore Gregory J., "An International Relations Perspective on the Science, Politics, and Potential of an Extraterrestrial Sino-US Arms Race," *Asian Perspective*, Vol. 35, no. 4, 2011, pp. 643-658.

⁵⁴ Moore Gregory J., *op. cit.*, p. 644.

resources (90% of space technology has potential dual - civil and military), interested in investing in advanced presence in space.

China cannot exclude the possibility of armed conflict with the US, unable to ignore the need for any action capabilities against US space objects.

Currently there is no international for regulatory framework regarding own space objects⁵⁵, although some situations deserves attention. Thus, in China's perspective, the US development of missile defense system (BMD⁵⁶) has negative consequences, proposing a ban on testing more than 300 km. Both China and Russia proposed building a joint system against threats with the US version denied by the US.

At proposals that can stop an arms race in space are several possibilities: to "Mutual measured missile defense," limiting tests at low altitude, preventing deployment of systems in space⁵⁷, development of technology and cooperation for waste disposal / debris on low orbits around the earth⁵⁸.

Aspects favoring arms race in space that worries China are low trajectory missile defense USA, limited exchange of data on missile defense between the US / NATO-Russia or other arrangements affecting China, not including China arrangements for data exchange.

On the other hand, the withdrawal of China from the agreement China-Russia notification mutual missile launches, a lack of availability China-US early warning⁵⁹, regulation launches accidental creation of a missile the US-Japan Hokkaido islands⁶⁰, deployment of radars in Taiwan⁶¹ They are realities that affect strategic stability.

A proposal for an agreement on "all intentional collisions of objects above the atmosphere" and a moratorium on testing ban extra atmospheric instruments can discourage arms race in space.

Prohibition weapon systems ASAT above 300 km and any activity that produces waste in space⁶² as long as the US and China believes that conducting tests BMD at low altitude (atmosphere) is a right of every nation and passing tests exoatmosphere is the next step in the escalating arms race in space.

Any militarization of the space by the US will make the arming race inevitable, since China will be considered vulnerable and will proceed accordingly⁶³.

USA supremacy of the land is likely to be countered by China by preventing US domination of space, which is proceeded by launching an arming race in space⁶⁴.

⁵⁵ The European Union Code of Conduct in Space. Mărcău Flavius Cristian, "Security as a determining factor of quality of life in a state from an insecure regional area," *Analele Universității „Constantin Brâncuși” din Târgu - Jiu*, nr. 4/2015, Seria Litere și Științe Sociale, Editura „Academica Brâncuși”, pp. 77-85.

⁵⁶ Ballistic missile defense (BMD).

⁵⁷ Antisatellite (ASAT) capabilities.

⁵⁸ Low-Earth orbit (LEO). For future, "the International Space Traffic Management Organization" could be one solution.

⁵⁹ Early-warning systems (EWS) - launch time, launch point, and azimuth are shared, but payload does not need to be disclosed.

⁶⁰ SM-3 Block IIA or IIB ABM systems.

⁶¹ The PAVE PAWS radar system.

⁶² Van Ness Peter, "The Time Has Come for a Treaty to Ban Weapons in Space," *Asian Perspective*, vol. 34, no. 3, Fall, 2010, pp. 215-225.

⁶³ Moore Gregory J., "China's Strategic Posture in the Asia-Pacific Region under the Leadership of Hu Jintao," in Simon Shen and Jean-Marc Blanchard, ed., *Multidimensional Diplomacy of Contemporary China*, Lexington Books, Lanham, MD, 2010, p. 25.

⁶⁴ Dolman, Everett C., "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century." in John Logsdon and Gordon Adams, eds., *Space Weapons: Are They Needed? Space Policy*, Washington, DC, 2005, p. 3.

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