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SINO-AMERICAN RIVALRY IN SPACE —SELECTED STRATEGIC AND POLITICAL ISSUES

Probably the most noticeable feature of 21st century international relations is increasingly acute competition between the United States and the People's Republic of China (PRC). The former is a sole global superpower and intends to conserve the existing world order, which America greatly helped to create and which suits its interests well. The latter believes that its history, culture, multi-faceted potential and quick economic growth predestine China to become a truly global player with the power to alter international order to fit its interests and aspirations better than it does today. This somewhat natural contradiction is the source of an inevitable rivalry, which has significantly intensified in the last decade due to momentous political shifts administered by the Chinese leader Xi Jinping, who rose to power in 2013. In effect, the assertiveness of China's foreign policy has dramatically increased, accompanied by re-doubled economic expansion and accelerated pursuit of international prestige. Certainly, the military spendings have mounted as well.

Due to these developments, the United States became increasingly worried that its so-cherished world leadership would be jeopardised, and so it has hardened its position vis-a-vis China. This way, the new dynamics of the Chinese international strategy led to the substantial intensification of tensions with the United States. One of the most prominent facets of Beijing's policy is a quickened pace of developing the People's Liberation Army's (PLA) military capabilities, which also encompasses an effort to enhance prowess in space applications. Unavoidably, advancement in space capabilities wielded by the Chinese military has invoked the reaction of the United States, hence the mounting rivalry in space.

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This article will describe three closely intertwined aspects of space rivalry between the U.S. and China against the background of their general relationship. The first refers to strategic considerations related to the military as a tool of global influence. The second covers the process of securitisation of the Chinese advancement in space applications in the United States. And finally, we will address the competition for international prestige, which is one of the essential factors of Sino-American relations.

It seems natural that using the realist paradigm is the best way to explain issues related to great power rivalry, particularly when strategic matters are considered. That is why we intend to conduct the bulk of the analysis according to this traditional approach. However, we believe that realism is unfit to grasp all the depths of political processes frequently related to internal developments, including internal power play within nation-states. Therefore, the securitisation theory of the Copenhagen school will be briefly employed to explain some internal factors shaping the United States foreign policy. We believe that this kind of theoretical pluralism allows a detailed and comprehensive explanation of the problems in question.

The methodology of the presented research is based on qualitative methods as we attempt to analyse broad political processes based on strategic realities and perceptions. The material for the investigation has been collected from documents (both primary and secondary sources), peer-reviewed analyses and open-source Internet information. Gathered material has been examined mainly using content analysis, but discourse analysis was also applied. The research was executed in the form of desk studies.

1. CHINA'S GLOBAL AMBITIONS

The recent evolution of the Chinese international posture has contradicted the previous and long-standing strategy to keep a low political and military profile while using economic strength and "soft power" to advance Beijing's interests and influence. This posture, implemented for decades and labelled "peaceful rise" in 2003, stipulated that it was possible and desirable that China would ascend to the rightful place in the world by purely peaceful means (Bijian, 2005). Therefore, military power was not a primary tool for advancing foreign policy interests, and so it was almost strictly defensive in nature. Conversely, the current Chinese international strategy gives the military a role

as an instrument of advancing political influence in the world, much like it is in the case of the United States global strategy.

The distinctive feature of the contemporary Chinese international strategy is that the Middle Kingdom perceives itself as an ascendant global power. It means that Beijing prepares to take a leading role in every aspect of world affairs and exert decisive influence in every region. In short, it is going to depose the United States from its position as the single global superpower (Doshi, 2021). Certainly, this ultimate goal is expected to materialise in the somewhat distant future, officially in 2049, but the authorities in Beijing pursue it with relentless zeal.

The application of this new global strategy has resulted in a profound paradigm shift in its military-related part. Until recently, a large land army, supported by a highly capable air defence system and powerful missile force, was supposed to discourage any enemy from attacking the Chinese mainland. A modest in quantity but believed to be sufficient strategic nuclear deterrent was considered the weapon of the last resort. And so, the PLA was a competent defensive force, constantly in the modernisation process to meet the challenges of the contemporary battlefield. Consequent implementation of the newest military technologies led to the establishment of a robust outer defence line extending several hundred kilometres off the Chinese borderlines, most notably into the adjacent seas. In modern western, primarily American, terminology it is called Anti-Access/Area Denial (A2/AD) capability (Biddle, Oelrich, 2016). In essence, it is the ability to prevent an aggressor from operating within the zone of control established by a defender's air defence and long-range strike systems. Properly executed, it should create a perimeter within which the enemy forces cannot operate so they cannot stage attacks against crucial targets. The extent of this zone depends on the operational range of defensive weaponry, quality of offensive assets and effectiveness of *Intelligence, Surveillance and Reconnaissance* (ISR) capabilities (Czajkowski, 2018, pp. 76-81). Note that despite the fancy acronym, A2/AD is just the newest incarnation of a centuries-old forward defence strategy.

The adoption of the forward defence concept by the PLA was a clear answer to the American way of waging wars which envisioned swift destruction of enemy's infrastructure with the use of long-range precision strike assets. In practical terms, it meant the creation of large anti-access bubbles equipped with layered air defence and short- to long-range missiles, aided by an extensive ISR network. This way, a vast numerical advantage of the well-equipped Chinese military over highly sophisticated but limited in quantity American offensive forces has been established. The PLA is also capable of attacking

the American sea-borne assets operating in the staging areas within several hundred kilometres off the Chinese shore. The U.S. bases in the Western Pacific are within the striking range of the PLA's missiles, too. In effect, the United States probably cannot execute the effective war of attrition against China, simultaneously avoiding significant losses, as it is used to do.

The abovementioned defensive posture is well-suited to prevent the PRC from being coerced and enables conducting independent foreign policy effectively. However, ambitions to exert global influence require, as it is believed in China, to go well beyond it. The military with a worldwide reach that could back policies and interests throughout the world is necessary to vie for power in faraway regions and win the global struggle for influence. The United States armed forces' global presence is the best model for such a strategy. The U.S. not only wields sophisticated weaponry and employs well-trained manpower but has also developed an enormous worldwide logistics infrastructure. It allows relatively limited, in comparison to the magnitude of the mission, forces to be quickly transferred wherever and whenever needed. Then they may be used either as a display of political will or as a coercive measure. The symbol of American presence is a Carrier Strike Group (CSG) organised around a nuclear-powered aircraft carrier. It can be relocated quickly and can defeat an air force of a medium-sized country and deliver debilitating strikes against the enemy military and economic infrastructure.

The Chinese authorities believe that if the nation is to rival the American political influence throughout the world and conduct its own policies and strategies effectively, it must possess a similar ability. In practice, it means that it must emulate the American pattern of exerting the worldwide military presence. That is why the last decade has seen increasing effort to produce combat forces and logistics which stretch beyond defensive needs. And so, China is not only enlarging and enhancing A2/AD zones and strengthening a nuclear deterrent. The development of the military might of China also encompasses the creation of extensive power-projection capabilities (CRS, 2021). They are supposed to lead to establishing a global military able to be present throughout the world and back the Chinese political and economic interests (OSD, 2021).

To achieve the ability to project power globally, China certainly needs long-range weapons systems, a strong navy, and logistic capabilities to execute rapid redeployments of air force assets and ground troops. Furthermore, it must wield a sophisticated worldwide net of military-grade positioning, communications, and ISR assets to support global presence and effective operations.

Numerous platforms can execute the ISR tasks, starting from fixed installations to mobile ground elements and airborne units. But surely the most capable of them, although certainly not without significant weaknesses, are space-born platforms, conventionally called satellites.

The advantages stemming from placing positioning, communication and ISR assets in space are obvious and need not be elaborated here. Suffice to say that the global domination of the United States military largely depends on numerous space systems (USSPACECOM, 2021). They are, as a whole, the essential force multiplier enabling decisive actions using relatively small units which sustain limited combat and non-combat losses (Czajkowski, 2020, pp. 233-250). Therefore, the last decades have seen the dynamic development of the Chinese military space capabilities as Beijing follows Washington's footsteps in creating the global in-orbit support system. Thus, China has already invested heavily in the development of space-borne military assets, and it is expected to maintain this effort in the coming years. It is not a subject of this article to describe Chinese military space systems in detail, however, it is worth noticing that every militarily significant space application is present in the PLA's arsenal, and the Chinese systems gradually mature and increase their effectiveness (Stokes at al., 2020).

The strategic significance of the rapid development of the Chinese military space systems naturally translates into a rivalry with the United States. This rivalry, however, does not have a simple symmetric character, as it looks at first glance. Its nature is more nuanced than the simple competition between an ascendant power that emulates a leader's capabilities to match and outstrip them. The main factor that shapes this rivalry and will continue to do so is not the Chinese struggle to bridge the gap between their abilities and the American ones. Instead, the most important will be how the Americans are going answer to the challenge. This answer is in the process of being shaped at the moment, but it seems that it is going to be asymmetric in nature and highly innovative.

And so, the structure of Sino-American rivalry in military space applications is as follows. China believes that without the ability to project power globally, it cannot become a true world-class superpower. Therefore, the Middle Kingdom must emulate the American space capabilities to foster the creation of a global military presence for use as a political tool. To do so, Beijing follows well-established patterns of technological development and proven strategies related to using space systems as force multipliers. Therefore, it is deploying space applications similar to those the U.S. possess to match the rival's capabilities. On the other hand, the United States do not want this to happen because Beijing's

global military reach would deprive it of the freedom of action, which is the cornerstone of the American global strategy. Consequently, the situation in which the Chinese space capabilities match the American is very inconvenient for the United States. That is why the U.S. attempts to develop new ways of using outer space and prepare new approaches to maintaining the advantage in space. Significant resources are being dedicated to achieving this goal, and most likely, by the middle of the decade, the new American military space architecture will start to materialise. It will be the product of technological advancement in space applications which has taken place in the last years in both civilian and military realms.

Therefore, the American side of the military space race with China is marked by a paradigm shift in thinking about the constitution and tasks of space systems (Harrison et al., 2021). The United States is preparing to build megaconstellations of small multipurpose satellites, highly adaptable, resilient, easy to reconfigure, substitute, and replace with more capable systems (Strout, 2021a). The range of capabilities of the new systems will be expanded compared to the current ones. Satellite systems' services will also be more distributed, and a wider assortment of them will be easier available to the individual user on the ground. In effect, the new American military space infrastructure will operate more effectively than the existing one. It will also possess new capabilities which will significantly enhance the overall usefulness of the network. Furthermore, they will be much less vulnerable than the Chinese applications, which emulate the current American systems.

Summarising the strategic aspect of Sino-American space rivalry, we should firstly underscore that it is in a relatively early stage. It is so because China has still a lot to do to match the current American military space capabilities in the first place. The United States military, in turn, is in the process of formulating the new technological and operational concept of using space assets. Therefore, we do not know to what extent the overall capabilities and resilience of the U.S. military satellite network will actually be enhanced in the coming years. Additionally, anti-satellite (ASAT) weapons (Bielawski, 2019, pp. 1-2) are a separate issue because if deployed, they would dramatically change the very essence of the landscape of space security and global strategic balance.

2. STRATEGIC COMPETITION—REALITY VS. SECURITISATION

As we have already mentioned, China is constantly developing militarily relevant capabilities in outer space as a part of the overall increase of the PLA's might. Certainly, these advances put the U.S. forces' freedom of action in question, particularly in the Western Pacific. However, we believe that these developments are much less a threat than they are portrayed in the American political discourse and information space. It means that the Chinese space activities are highly securitised, what results in significant threat inflation. This way, strategic rivalry intertwines with political processes in the United States.

In general terms, we notice a growing feeling of insecurity related to maturing of the Chinese military space programme as a whole (ODNI, 2021, pp. 7-8). It is often repeated that Beijing intends to match and surpass the American space capabilities, what would result in a dramatic shift in the global military balance. In reality, however, it is not sure if the PLA will be able to build a space network comparable to the one belonging to the United States in the foreseeable future. It is very difficult to explain this argument in technical terms within the framework of this article, suffice to say that there are two correlated issues here. First is the challenging process of developing the newest technologies, which is expensive, risky, and, above all, usually very long. Second is the simple fact that the American side does not sleep and is poised to increase funding of the new technologies and is adopting new approaches to military space activity. Therefore, we believe that it is more likely that the American advantage in space will grow in the foreseeable future instead of being diminished as pessimists predict.

We understand that the abovementioned argument appears unfounded in the light of the development of the Chinese anti-satellite systems. It is often argued that the U.S. space systems will soon be easy targets for the PLA's novel weapons. According to the long-standing notion of possible/coming/inevitable "space Pearl Harbor" (U.S. Congress, 2001, p. viii), the Chinese are going to achieve the advantage or even superiority in outer space by destructing the American systems. This idea assumes that the PLA is preparing to take out adversary's space installations with a surprise attack to deprive the U.S. forces of vital advantage (Chow, 2018). In the case of such an event, a dramatic shift on the global strategic stage favouring China would occur without a long and uncertain process of "overtaking" the United States in every aspect of space technology. Such thinking is not entirely baseless because China does conduct research and development work on anti-satellite technologies (Weeden, Samson, 2021,

pp. 1-1–1-28). Therefore, it seems likely that the PLA will obtain an operational capability to destroy the American space systems in the next few years. Thus, the notion of "space Pearl Harbor" seems plausible.

However, a thorough investigation of numerous contexts of the potential deployment of anti-satellite weapons by China brings somewhat different conclusions. Considering the natural limitations of space exploitation, the status of associated technologies, operational realities, and economic constraints, we conclude that China most probably will not deploy ASAT weapons in significant numbers, at least in the foreseeable future. This conviction stems from four reasons, which we have explained in detail in one of our previous articles (Czajkowski, 2021). In brief, the argument goes as follows.

Firstly, should Beijing decide to attack the U.S. space assets, it will risk losing its own orbital networks. It is because the American global *Ballistic Missile Defence System* (BMDS) is capable of effectively conducting anti-satellite missions even though it is not officially tasked to do so. This way, in the case of an exchange of blows in space, all the Chinese aspirations to create global projection capabilities will be over, and the U.S. military, however crippled, would retain a strategic advantage over China.

Secondly, there is a threat of the Kessler effect (Kessler, Cour-Palais, 1978). It is a theoretical concept providing that the destruction of one satellite would lead to the creation of a massive cloud of space debris, which would, in turn, destroy other satellites and produce even more debris. As an outcome, a sort of cascade effect could, in theory, gradually render some orbits unpassable; the extent of such pollution in each separate case is probably impossible to forecast in advance. It means that anti-satellite weapons are inherently unpredictable, so their usefulness as a means of warfare is highly questionable. Thus, even in the event of limited use of these weapons, China may accidentally obliterate some part of its own space infrastructure.

Thirdly, there are non-destructive means to deny enemy satellites at least some of their capabilities, like blinding, dazzling or cyber intrusions. In fact, such counterspace operations are being conducted on a daily basis by both sides. Therefore, it is impractical for China to embark on a costly and dangerous path to anti-satellite weapons as long as it already possesses means to hinder the adversary's satellite capabilities with much less risk attached.

And fourthly, the Chinese potential ASAT system would most likely be confronted with increasingly resilient, proliferated American space architecture. It means that the PLA would have to muster an enormous and costly force to curtail the adversary's growing capabilities effectively. This way, despite all

the effort, Beijing's anti-satellite arsenal may not reach the ability to execute "space Pearl Harbour" owing to the possible quick pace of increase of the U.S. military space systems' resilience.

Due to the abovementioned reasons, it is rather improbable that China does intend to deploy ASAT weapons in significant quantities, what would inevitably lead to an expensive arms race in space with all the dangers it would bring. Certainly, Beijing will continue its R&D works on this kind of weaponry, and it may even decide to field an experimental ASAT force. It will do it to hedge against possible future sudden developments and to mature important technologies. But we believe that there will be no massive deployment of counterspace weapons capable of destroying the American future space infrastructure.

Summarising to this point, the "space Pearl Harbor" is not likely to happen in the predictable future. Neither will China surpass the space capabilities of the United States in the coming years. Certainly, we cannot exclude the opposite scenario, but it is far less likely. We also admit that the expansion of the Chinese military space programme is a fact, and it bears strategic significance. The PLA's might is mounting, and it is developing some global capabilities. Therefore, the strategic risk for the U.S. forces' freedom of operation is rising and will be rising in the future. So, the threat is growing, but it does not have the scope and shape it is widely believed to have. So, let us repeat that regarding the future safety of American space capabilities, the Chinese threat is much smaller than it seems, and, most probably, it will remain so. In the light of current American investments and the development of new technologies, China seems to lack the expertise and time to develop abilities to make "space Pearl Harbour" happen.

Now, the question remains why the securitisation of the Chinese space programme in the United States persists. Why the space programme of the Middle Kingdom is often portrayed as an almost existential threat to the U.S.

There are many answers to these questions, which mainly refer to the characteristics of the American strategic culture. Additionally, some specific qualities of the political institutions in the United States enable powerful groups' vested interests to influence public opinion and the government.

The latter of the abovementioned issues is rather apparent. The securitisation theory points to the typical mechanism of political advocacy. Thus, we can easily name numerous lobbies interested in augmenting related capabilities to benefit from the possible arms race in outer space. Unfortunately, there is no place within the framework of this article to tackle this issue in detail. However, it is a well-known problem (Drutman, 2015; Alic, 2021) that has been the subject

of research for decades since president Dwight D. Eisenhower so accurately identified it in his farewell address (Eisenhower, 1961).

The impact of the American strategic culture on the securitisation process is multi-faceted, and it also cannot be described in-depth within the framework of this article. So instead, we will point at two distinct features of this phenomenon.

The most general characteristic of the American foreign policy is that it is highly militarised. The use of armed forces, be it as a sign of political will or coercive measure, is an instrument of choice in various situations. From the deployment of CBGs, to drone strikes, to permanent military presence, and to waging open wars against perceived threats, the United States extensively utilises its military preponderance worldwide. Obviously, the ability of this instrument to perform attributed tasks rests on the advantage it has over the enemies. Once this advantage is reduced, the military weakens in comparison to the given adversary, and, consequently, its political utility diminishes. This way, the overall effectiveness of the foreign policy contracts as well. In the case of the United States, it means that an ability to exert a global influence that has been the cornerstone of the nation's foreign policy since WWII is in jeopardy.

As space systems play an essential role in the American military effort, specifically by enabling its global presence, it is evident that the advantage in space and safety of the space systems remains of paramount importance for the United States. Therefore, the situation in which the advancement of the main adversary's space capabilities would lead to denying the U.S. freedom of action in space and freedom of use space assets is intolerable for the United States (USSPACECOM, 2021). Hence the desire not to let it happen and preserve precious advantage in outer space for the sake of the overall foreign policy effectiveness.

More specifically, the most important attribute of the American strategic culture is the pursuit of a decisive, absolute advantage in every situation involving the use of armed forces, be it in combat or for other purposes. It is, indeed, the desired situation for every international actor, but the United States is in a unique position that it does have a decisive advantage in the majority of the instances when the U.S. military is involved. This position stems from the complex and expensive development of globally effective firepower, which started even before WWII. In 1991, after the demise of the Soviet Union, the United States became unquestionably the greatest power in the world with the ability to prevail against every possible enemy. The so-called "unipolar moment" fuelled already huge self-confidence of the American decision-makers. The sense of absolute military preponderance, so desired and finally achieved, resulted in over-reliance on the military as an instrument of day-to-day foreign policy.

But in the first decades of the 21st Century, the situation has become changing gradually. The dissemination of advanced technologies and the maturation of asymmetric means of warfare have increased the military capabilities of many countries relative to the American power. Furthermore, the military resurgence of Russia and the development of the PLA have deepened the American conviction that its military domination is being jeopardised. In the course of "forever wars" in Iraq and Afghanistan, it has also become apparent that even formidable might of the U.S. forces cannot prevail in various conflicts due to operational, political and economic constraints. The prospect of diminished advantage thrills decision-makers and society and brings frantic effort to counter the changes which are deemed dangerous.

This mechanism is clearly visible with regard to space systems and the development of military space applications. The use of space was and is one of the most critical factors of the American military domination. Thus, should the other nation match the U.S. capabilities in space, it would, presumably, be able to contest the United States worldwide military presence effectively. As a result, the American foreign policy would be deprived of one of its primary advantages. Furthermore, should another country create the ability to deny the U.S. use of its space assets while simultaneously remaining free to use its own, the consequences would be even more dreadful. In such a case, the United States would be deposed from its position as a global power and pushed into the defensive. It is therefore imperative to not let it happen.

In other words, the American strategic culture has evolved in a comfortable strategic environment. For decades the United States, hidden behind powerful fleets and walls of nuclear deterrents, was tending local alliances and fighting wars of choice far away from its shores. Then, in the 1990s, it finally managed to overcome the greatest of adversaries, cementing the nation's absolute security from military threats. That is why a vast majority of the American politicians, pundits and society perceive the military advantage and ability to win every possible war as an indispensable feature of the global strategic posture. This posture also stems from global interests and influence, which flow, to a great extent, from the ability to execute a global military presence. Thus, the unbreakable feedback loop between military might and global influence emerges as a backbone of the American strategic culture. Therefore, it is evident that allowing other power to match the American capabilities in space and/or deny the U.S. the use of its orbital network is considered an intolerable vulnerability.

Summarising, let us reiterate that we acknowledge that the Chinese military space programme poses a danger to the U.S. freedom of military action, and

thus it weakens the effectiveness of the American armed forces as a deterrent and foreign policy tool. This threat indeed grows (Pellicore, Nelson, 2021). But its perception surpasses the actual shape due to the ongoing process of securitisation. The result is the growth of funding of the American military space programme and organisational changes (Strout, 2021b), which are supposed to offset the perceived threat and prevent the adversary from denying the United States its advantage.

3. PRESTIGE — A KEY POLITICAL DIMENSION OF THE RIVARLY IN SPACE

The struggle for prestige constitutes a good part of the overall competition between nation-states, and it is a perfectly natural feature of international relations. The display of status and strength of any given country is highly instrumental to building the capability to influence others. Hence, the higher aspirations of the rivalling powers, the stronger the need to pursue prestige. In the case of China and the United States, stakes are the highest possible, so the struggle for prestige is of paramount importance. This way, outer space activities of the PLA are not only vital from the point of view of strategic considerations or internal U.S. politics as described above. The political significance of the maturation and increasing effectiveness of the Chinese military satellite networks is also a crucial part of the Middle Kingdom political strategy to become a global power. It is because the military realm and high-technology industry are essential fields where competition for prestige unfolds, and both domains fuse in military space technology.

China is an ascending power, so it must first display strength and capabilities significant enough to be considered a real competitor of the United States, even if it would remain weaker for the time being. Notice that as long as prestige is concerned, the perception of certain activities is as important as the capabilities themselves. Therefore, China has not only made an enormous effort to develop every aspect of space exploitation and exploration. It has also invested vast political capital and information resources to sell space activities to the world public to signify the Middle Kingdom's military, economic, and scientific power. As a result, China is now widely regarded as the second world power not only in the economy and military but also in the space domain, even though the effectiveness of the Chinese military orbital network is limited compared to American space architecture.

Obviously, at this stage of the competition, China seeks opportunities to send more signals that it is actually able to match or even surpass the American capabilities. And no matter if it means the development of significant and effective space systems or the ones useful only in the propaganda realm. For example, prestige is one of the reasons why China is developing anti-satellite weapons, although we have already explained how impractical they are. Notice that it is a kind of weaponry that does not officially exist in the American arsenals, and it is only one thing that matters. Beijing capitalises on the reluctance of the American government to acknowledge that BMDS is inherently ASAT capable, suggesting that it has already outstripped the U.S. space capabilities because it may destroy satellites in orbit and the Americans cannot. When prestige is at stake, it is not important what realities are. What is important are perceptions of individuals, nations, or governments, which are supposed to be impressed and influenced. And thus, ASAT weapons, even if not deployed in quantities that would be enough to change the military balance, represent what China has or may soon have, but the United States has not developed yet. This way, the worldwide impression that China has actually surpassed the American space capabilities and soon will be able to deny the U.S. its advantageous position is growing.

On the American side, the race for prestige is also very important. It is well remembered in the United States how the launch of Sputnik-1 sent shockwaves throughout the world and how endangered the American leadership was. And no matter that the Soviet Union was losing the space race for practical applications from its very onset, prestige was badly hurt anyway. That is why, reluctant at the beginning (McDougall, 1997, p. 133), the Americans understood the political role of the race (NSC, 1958) and decided to take part in it in full. And prestige was also what they went to the Moon for.

Today the situation is somewhat similar. The United States is an unquestioned leader in every relevant space application, but China is constantly developing similar capabilities of its own. A sudden leap forward, an event similar to the Sputnik Moment, is rather unlikely, but steady growth of the Chinese proficiency in space is an established fact. Prudently orchestrated and well-advertised further progress of space military and civilian programs may lead to the already mentioned impression that China has matched and outstripped the U.S. in space. It would represent something comparable to the Sputnik Moment, even if not as abrupt as the original one.

That is why, for the sake of its prestige and world influence that follows, the United States is compelled to take up the race for prestige, however militarily

unnecessary and costly it would be. Lack of a clear strategy for the future space architecture development is a sign that political, not military or strategic considerations are primary drivers of the effort. Thus, the paradigm shift in the thinking of military space systems mentioned above stems more from the false presumption of imminent Chinese threat than from real strategic considerations. Nonetheless, it is a fact and a very meaningful one. It will result, let us repeat, in increased spending, which, in turn, will bring new capabilities and increased resilience to the American space architecture.

CONCLUSIONS

This article's main task was to describe three intertwined strategic and political aspects of the mounting Sino-American rivalry in space. However, we must admit that other important issues have not been mentioned in detail, such as scientific rivalry for prestige, the economic race for customers, changing relations between these two leading spacefaring nations and other states, particularly Russia, and many others. Thus, the rivalry in space between China and America is as complicated as the overall competition between these states.

The general conclusion that we can draw from our investigation is that the United States is going to remain the leading space power, at least it is the most likely scenario. Furthermore, there are signs, however not clear yet, that the U.S. is in the process of acquiring an even greater advantage, despite the Chinese investments in the development of space capabilities. On the other side, the prestige Beijing is gaining by sheer participation in the space race as purported Washington's near-peer competitor raises steadily, even though a "near-peer" is somewhat a euphemism.

The more detailed conclusions and predictions for the future are as follows.

1. The prospect of Sino-American strategic competition in space systems is unclear at the moment. Particularly, it is not exactly sure what strategy the United States will employ with regard to the future of its presence in space. It will greatly depend on the course of a debate regarding the threat the Chinese activities in space represent. It is, therefore, not sure if the U.S. will employ a balanced strategy containing diplomatic effort and building multilateral cooperation in addition to military effort (Starling et al., 2021). Or maybe it will embark on a unilateral path to create militarised space hegemony (Dolman, 2002, 2012).

2. Despite the abovementioned doubts, it is rather clear that the United States is going to ramp up effort oriented on increasing the resilience end effectiveness

of its military space systems. It will happen due to the acknowledgement of strategic realities and ongoing securitisation, which cannot simply be reversed. There is a telling historical parallel concerning that mechanism. In the 1950s, the Soviet Union was purportedly ahead of the United States in building strategic bombers and intercontinental missiles. Therefore alleged "bomber gap" and "missile gap" in favour of Moscow had emerged, although the reality was entirely different. Nonetheless, U.S. Congress willingly adopted vast plans to procure hundreds of bombers and missiles in response to perceived threats. In effect, the American advantage in nuclear weapons and means of delivery significantly grew, prompting, among the others, the increasing Soviet effort to bridge the gap.

3. The future Sino-American space rivalry will be somewhat asymmetric. For the most part, China will emulate the present American patterns. In effect, the Middle Kingdom will eventually build the global military space system, which, in the lenses of propaganda, will pass for an equivalent to the American network. On the other hand, the U.S. will follow new ways regarding composition and operational concepts of satellite systems, which will bring new capabilities and new advantages. Most probably, the Chinese will not be able to emulate the new technologies quickly, therefore the U.S. preponderance in space will most likely grow.

4. We believe that ASAT systems will not be deployed in significant quantities. Nonetheless, we agree that the anti-satellite arms race is one of the possible outcomes of the Sino-American rivalry for prestige and strategic advantage, and either side may trigger it. For the sake of clarity, it is also likely that Russia may start the ASAT arms race for its own reasons (Felgenhauer, 2021). It is undoubtedly the most dangerous possible consequence of the competition we have described, since possible contamination of orbits may occur. It may happen not only in the case of an intentional exchange of anti-satellite blows but also accidentally or in the course of an unwanted escalation.

Lastly, although this comment goes beyond the matters covered by this argument, we should notice that the future of Mankind in space will not be shaped only by governments and their competition as it has been until recently. Instead, the new patterns of space exploitation are currently emerging, as commercial entities which wield a full spectrum of space technologies compete for a chunk of the growing space economy. The relations between the new civil space industry and the nation-states, most notably primary space powers, are yet to be shaped. It is clear, however, that new types of actors have entered the space race and will strongly influence it, Sino-American rivalry included.

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SINO-AMERICAN RIVALRY IN SPACE —SELECTED STRATEGIC AND POLITICAL ISSUES

Summary

This article will describe three closely intertwined aspects of space rivalry between the U.S. and China against the background of their general relationship. The first refers to strategic considerations related to the military as a tool of global influence. The second covers the process of securitisation of the Chinese advancement in space applications in the United States. And finally, we will address the competition for international prestige, which is one of the essential factors of Sino-American relations.

Keywords: outer space; international security; space security; space weapons; anti-satellite weapons; USA; China.

AMERYKAŃSKO-CHIŃSKA RYWALIZACJA W KOSMOSIE – WYBRANE ASPEKTY STRATEGICZNE I POLITYCZNE

Streszczenie

Niniejszy artykuł opisuje trzy ściśle powiązane aspekty kosmicznej rywalizacji między Stanami Zjednoczonymi i Chinami tle ich ogólnych stosunków. Pierwszy omawiany aspekt dotyczy kwestii strategicznych związanych z siłami zbrojnymi jako instrumentem globalnego wpływu. Drugi obejmuje proces sekurytyzacji chińskich postępów w rozwoju zastosowań kosmicznych w Stanach Zjednoczonych. Trzeci odnosi się do konkurencji o międzynarodowy prestiż, która jest jednym z najważniejszych czynników relacji chińsko-amerykańskich.

Słowa kluczowe: przestrzeń kosmiczna; bezpieczeństwo międzynarodowe; bezpieczeństwo kosmiczne; broń kosmiczna; broń przeciwsatelitarna; Stany Zjednoczone; Chiny.