NUCLEAR DOCTRINE AND DETERRENCE: A CHINESE PERSPECTIVE

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Some 2,500 years ago, Sun Tzu recommended that, if possible, one should occupy the high ground. Space provides a new aspect to this principle: unimpeded access to outer space and unrestricted freedom to use outer space and the celestial bodies provides a tempting opportunity for a technologically advanced country to seize control of outer space and deny freedom of its use to other countries that stand in its way[1].

The strategic balance pertaining to nuclear weapons in the present scenario (worldwide) exists in a *status quo* (explained by the deterrence theory) which is likely to become unstable with the perfection of missile defence systems (ground and/or space-based). This development is likely to question the prevailing deterrence theory which banks upon the *principle of uncertainty*[2].

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1. Paul B. Larsen and Francis Lyall, *Space Law: A Treatise* (UK: Ashgate, 2009), p.499.
2. According to the *principle of uncertainty*, a nuclear exchange is ruled out for the simple reason that no actor is willing to initiate a nuclear exchange for the risk of retaliation, based on a certain calculation that the actor cannot guarantee complete annihilation of an opponent's nuclear arsenal. This dilemma is central to the deterrence theory.

Both India and China emphasise the value of strategic force in negating the deterrence and compellence strategies of others, more than the United States does.

"Deterrence"[3] is a word with many connotations, and some of its concepts are not similar in the case of different actors (India, the United States, Pakistan, and China). While both China and India have designed their nuclear doctrines by stressing on assured (or massive) retaliation (*no first use)*, the Pakistani and US doctrines are based on threat (perception) and preemption[4]. However, while both countries (India and China) prefer a nuclear strategy that is based on a minimum number of nuclear warheads, India seeks *credibility* and China is expected to move towards *a limited* deterrence posture. While China's true capability and doctrinal understanding are ambiguous and uncertain, there is debate in India regarding whether secrecy is impacting its deterrence negatively. Both countries include *disarmament* as a final objective[5].

These different approaches to a nuclear doctrine are inherently opposed to each other and in conflict. However, many of the strategic concepts align closely, for example, the value and importance of nuclear weapons in inducing dread and restraint. A certain conceptual clarity in the difference in approaches while constructing a nuclear doctrine by various actors could provide the yardstick to gauge the future directions it is likely to take.

3. The word "deterrence" is derived from the Latin *de+terrere*, literally "to frighten from" or "to frighten away". Thus, fear is central to the original meaning of deterrence. The idea that vast, indiscriminate, and unacceptable damage would be inflicted in retaliation for aggression, as was associated with the prospect of the aerial bombing of open cities in the 1930s, or the employment of nuclear weapons since World War II, has long been central to the popular understanding of the term deterrence. John C. Hopkins and Steven A. Maaranen, "Nuclear Weapons in Post-Cold War Deterrence" *Post-Cold War Conflict Deterrence*, Appendix E (Los Alamos National Laboratory, 2006), p.1-2.
4. The US nuclear strategy, which obtained from the 1960s until the collapse of the Soviet Union, was extended nuclear deterrence. Under this doctrine, the United States deterred a direct attack upon itself with strategic nuclear forces, while extending protection to its Cold War allies and friends by promising to escalate a war to the nuclear level if they were in danger of defeat by Soviet-led forces, even if this entailed first use of nuclear weapons by the United States. Ibid.,p.2. .
5. Manpreet Sethi , "Fire in the Dragon: China's Nuclear Doctrine and Strategy" in *Nuclear Strategy: India's March Towards Credible Deterrence* (New Delhi: KW Publishers Pvt Ltd), pp.116-117.

Both India and China emphasise the value of strategic force in negating the deterrence and compellence strategies of others, more than the United States does. While China operationalises a doctrine which is based on *negation*, the United States locates it at *threat* (perception) and *preemption*[6]. By this logic, China wants to successfully discourage an adversary from opting to use nuclear weapons (or threatening their to use). It invokes the term "counter-deterrence" to describe its strategy in a way the United States does not. And this requires "counter-deterrence operations" for the purposes of signalling resolve, including counter-attack and reattack. China's emphasis on such operational roles for strategic weapons in achieving strategic results is unmistakable – and rather *different* from the United States that seems to rely simply on the long shadow of its vastly more numerous arsenals to induce restraint by potential adversaries. However, there is a perception in the United States that nuclear weapons are a burdensome legacy of the Cold War that have lost their relevance and perhaps become counter-productive to American and international security. Deterrence is understood as vital to the US national security strategy, but perhaps it can be achieved by a combination of actions ranging from preventive diplomacy to military deterrence by means of modern conventional weaponry. In the present times, military deterrence remains an important US tool, but nuclear weapons have now assumed an unstated (but powerful) supporting role, while American, allied and multilateral conventional forces currently supply the bulk of day-to-day deterrence. This analysis argues that in the future (given the developments in science and technology), *space and its weaponisation* is likely to be a crucial determinant in gauging the possible restructuring that China's nuclear doctrine is likely to undergo.

6. The need for caution has been reinforced by the revelations about the quality of US intelligence on WMD that followed the intelligence failures vis-a-vis the WMD programme of Saddam Hussein. As argued by the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, in its cover letter to the President, of March 31, 2005, "We still know disturbingly little about the weapons programs and even less about the intentions of many of our most dangerous adversaries." This is a cautionary reminder of the need to treat information, even that which is provided by the US government, with an element of caution that admits the possibility that it may be wrong or misleading in some significant respects.

China considers weaponisation of space as a destabilising move, and links the technological development of ballistic missile defence as the *first step* in this direction. All kinds of space-based weapon systems have been considered by the People's Republic of China (PRC) as *first strike (offensive)* weapons due to the *vulnerability associated with space weapons*. This characteristic of space weapons is likely to induce a shift in the Chinese nuclear doctrine. This framework helps in concluding the accurate meaning of China's Anti-Satellite (ASAT) weapon demonstration in January 2007. This test was in terms of body language, an invitation to the United States to show seriousness on negotiating a space weaponisation treaty, which the US has been conveniently ignoring and avoiding. This difference is also due to concepts that make for deterrence theory in India and China vis-à-vis the US.

In the present scenario, under certain conditions (which have been well substantiated), the nuclear threshold levels are likely to drop and escalate the possibility of a nuclear exchange between India and China, the main reasons being tactical nuclear weapons, and lack of any serious institutional arrangement to avoid non-intentional use of nuclear weapons[7]. The premise here being that the doctrine which was held so far by the literature as defensive in the case of China and India, is now likely to get offensive in orientation. However, this shift needs to be accommodated within the overall defence and foreign policies of both countries. A minor shift in the nuclear doctrine is likely to cause major shifts in the other domains. It can be argued that this transition from defensive oriented nuclear doctrine to offensive is but a natural trend. As technology improves and makes a military (nuclear) solution viable, it is likely that the political elites may have a strong attraction for it and choose it or threaten to use it. This may be detrimental to China's overall foreign policy objective in peace-time. It will make little sense to alter it, at least at the rhetorical level, since No First Use (NFU) does make China appear less belligerent, more internationally acceptable, and even benign! It is also debatable whether first use would

7. These observations were expressed as part of the lecture delivered by Prof. Srikanth Kondapalli to senior level officers from the Indian Army, Navy and Air Force, on *China's Nuclear Doctrine* on September 9, 2011, at the Centre for Air Power Studies, New Delhi.

actually serve any purpose, and not prove to be suicidal instead. It can be argued that the shift in the NFU policy is unascertained at the operational or doctrinal/rhetorical level. If it is doctrinal, it is likely to put the region in a state of high alarm and set similar readjustment in foreign policy. This paper argues that this is likely if the development in space and its weaponisation is taken into account. China has an often made offer: a *universal no first use treaty*. On the other hand, if it is operational, then, as a RAND study of 2005 concluded, where use of force involves core interests such as sovereignty or territorial claims, Beijing "could claim military preemption as a strategically defensive act..." Even if nothing has been forthcoming from the Chinese side on this issue that either confirms or negates it, it is to suggest that *sovereignty* and *territorial integrity* are the key determinants that can produce an animation of how China is going to incorporate the first or no first use policy. It involves the United States of America, with its active policy of a "new world order". This is explained in three parts, which constitute nuclear weapons and their role in international security.

WHY WERE NUCLEAR WEAPONS USED (1945) AND SINCE THEN NOT USED?

Technically, nuclear weapons were used by the United States of America against Japan during World War II for the first time, and since then, have never been used. There is a crucial link between why the nuclear weapon was used then and not used since then. Why did the Allied powers use nuclear weapons against Japan? It was a strategic necessity, for Japan had located itself in a far superior military strategy than the Allied powers. It was the supply chain which did the trick for Japan. Since Japan was strategically inferior in scale, it adopted a weak man's strategy. It first reduced the Pacific Fleet strength of the United States Navy with a preemptive strike at Pearl Harbour and then embarked upon acquiring immediate territories, converting them into buffers, and protecting them with land aviation. Japan's war effort was located primarily in Japan itself and it continued supplying the war efforts generated at home, well secured, to its newly acquired territories. Clearly, there was no point fighting the Japanese anywhere in

Southeast Asia. The Allied powers were scattered and were moving their logistics all across the globe which reduced efficiency and was immensely costly for the result it produced. As this error in strategic thinking was realised within the Allied strategic circle, it became clear that the centre of gravity of the conflict for Allied power was in Japan. Therefore, the decision to bomb Japan, or else the war efforts would be prolonged without achieving any particular objective. It saved time, money and lots of lives. It can be argued that there was a certain military rationale that explains the use of nuclear weapons—the same may hold in the present or future times. However, it needs also to be ascertained as to what explains the non-use of nuclear weapons for six decades. The military rationale only explains the use of the weapon but cannot explain the consequence that unfolds after its use. Therefore, after its first use, the nuclear weapon ceased to be a military instrument since it could not justify the consequences of its use. It then transformed into a political instrument, the only way its possession and existence could be justified. The deterrence theory that developed since then locates the real use of the nuclear weapon in its non-use. In other words, it is used to extract maximum political mileage by managing the adversary's threat perception. Both India and China value this feature of deterrence while formulating their nuclear doctrine and posture.

DISARMAMENT: A FANTASY OR REALITY

Disarmament is usually referred to as an "international political condition" where no nation (a sovereign) possesses nuclear weapons and the world is free of nuclear war in absolute terms. However, it can be argued that this truth is a fantasy, for disarmament and nations (sovereign) cannot coexist. The international system as it exists today cannot incorporate both values—*disarmament* and *sovereignty*— simultaneously and, therefore, the need for stop-gap arrangements such as the Comprehensive Test Ban Treaty, Partial Test Ban Treaty, Fissile Material Cut-off Treaty and Nuclear Non-Proliferation Treaty (CTBT, PTBT, FMCT, and NPT). Within these treaty commitments, sovereignty is not completely compromised. India and China have in the past treated these arrangements as partial and resisted

joining them. Maintenance of *sovereignty* and *territorial integrity* are two important functions of a state (nation). Hypothetically, in any political condition where disarmament is a reality, the state would have been relieved of its duty to maintain these two functions. *Disarmament, in other words, is absence of sovereignty*. Therefore, the international community is not attempting to reach a point of disarmament but only to move towards it, and this involves international politics[8].

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ABSENCE OF SOVEREIGNTY: WHAT IS THAT?

For both India and China, their absolute sovereignty was suspended for a while from the 16th century onwards, as industrialisation in Europe brought the Western powers to their doorstep. Trade and its concern for the Western powers took them towards the path of using force in order to bargain for trading rights (the Opium Wars). This partial suspension of absolute sovereignty is held in Chinese political rhetoric as *a century of humiliation* and, therefore, the need for *regaining China's rightful place* in the international system in the 21st century. It can be argued from a high nationalist point that Europe presently no longer has sovereign entities that constitute it (at the least, in the economic dimension). However, the truth being that there has been a qualitative transformation in *sovereignty* as it has been practised in Europe since the end of World War II. It has moved from clashing national identities to a more international level, with the European Union as a common identity. The catch is that this transformation is true only for trade related matters. It helps the economics if Europe functions on

8. Thus, today we see that nobody is trying to expound the idea of "tipping point", in which they predicted that by 2020 certain things would happen, but refused to fix a particular date for the total elimination of nuclear weapons; nobody is even demanding it. The "four horsemen" (of nuclear disarmament) – George P. Shultz, William J. Perry, Henry A. Kissinger and Sam Nunn – have only said that we should move towards it. Transcript of a lecture delivered by the late K. Subrahmanyam at the Association of Indian Diplomats, Sapru House, New Delhi, on April 28, 2010. The author was a senior strategic analyst and former Director of the Institute for Defence Studies and Analysis, New Delhi.

a single economic platform. Banks would prefer this. While this transition has occurred in Europe, the sudden burst of national identity or its quest still surprises many analysts. There is this *force* in the international system that requires putting the whole world into one particular system for pure economic reasons. Starting with the Senior Bush, it was a stated policy of the United States of America to actively pursue and establish a *new world order*. It is required within this policy that nation-states across the globe display less concern for sovereignty (particularly with regard to trade). The one world government and one banking system are some underlying objectives of this policy.

WHAT IS A DOCTRINE?

Before discussing the Chinese nuclear doctrine and its likely course for the future, it is important to have clarity on what the doctrine and its function are? The term doctrine has been articulated by various scholars in various forms and shape, providing room for its inaccurate interpretation and understanding. *Doctrine is either a culminating point or the initial point (depending on how one chooses to see it) of bringing together almost everything that goes into war-fighting, peace-building, and elements of national security itself. Its function is comparable to a transformer. It converts capability, intentions, perception, and power (political and military) into action with a pre-set objective conceived by it.* Without an appropriate doctrine, it is not possible to act (in a particular way). Capability and strategy will not produce the required result if they are not placed within the appropriate doctrine.

In that sense, it is not a strategy or a way of doing things that presents the extent and limits of an action (political, diplomatic, and military). Its importance is understood clearly if it is viewed as symbolic or representative. It is an overall summation of the reality as it is decoded for decision-making in a space where time is constrained (war-fighting situation). It is a connecting tissue and must not be understood in the literal sense. A doctrine is a sort of declared secret. It requires a careful analysis in order to interpret it. The bulk of the literature has so defined *military doctrine* that it also includes elements of military strategy. According to Dale Smith, a military doctrine is a set of

views on war and the principles concerning its conduct that are adopted by the military leadership, taught in military academies and which provide the basis for war plans. Therefore, military doctrines represent beliefs about the kind of war the military expects to fight and the accepted wisdom about the best method for fighting it[9]. For example, amidst the Cold War, both the US and Soviet Union, at a certain point, realised that the *number of warheads* was of no significant importance due certain breakthroughs in the deterrence theory, which was now understood (as explained above) based on the *principle of uncertainty.* It was felt (in theory) that a minimum number of warheads could achieve a similar deterrence level as a maximum number of warheads. This meant a doctrinal shift accordingly. The introduction of air power since the 1920s and 1930s also induced shifts in military doctrine at that point in time[10]. Doctrine is the summation of reality, which cannot be ignored, while using certain capability in accordance with a strategy.

SPACE AND ITS INCLUSION IN THE CHINESE NUCLEAR DOCTRINAL STRUCTURE

China believes that the US is, in the most certain terms, moving towards *space weaponisation*. It is a calibrated move whenever the US is pursues a number of research programmes to enable the development of space weapons, which can be used not only to attack ballistic missiles in flight but also to attack satellites and targets anywhere on the earth. Beijing considers this to be highly destabilising and that it directly alters the strategic stability (*based on deterrence through denial*) that prevailed until now. While China acknowledges that the US intention might be to safeguard its space assets by placing weapons in space, it is counter-productive. Countries like China, India, Russia will oppose these initiatives at the political level and also militarily, triggering an arms race. Existing international legal instruments are inadequate to prevent outer space from being weaponised; however,

9. Rajesh Rajagopalan, "Doctrine, Strategy and Nuclear Weapons" *Air Power Journal*, vol.3, no.3, Monsoon (2006) (July-September).
10. Maaranen and Hopkins, n.3.

these instruments[11] have played a positive role in promoting peaceful use of outer space and regulating outer space activities. Space weaponisation fails the purpose of China's nuclear deterrent. Given the historical circumstances in which China embarked upon its nuclear journey, the immediate purpose of the weapon was to impose deterrence against the use or threat of use of nuclear weapons. China's deterrence theory envisions a "minimum number" of nuclear weapons to achieve the required deterrence.

11. Since 1960s, the international community has instituted a series of legal instruments on outer space, including the 1963 Limited Test Ban Treaty (LTBT), the 1967 Outer Space Treaty (OST), the 1979 Moon Agreement as well as some bilateral agreements. (1) Limited Test Ban Treaty (LTBT); Article I 1(a) of the Limited Test Ban Treaty (Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, LTBT) prohibits "*any nuclear weapon test explosion, or any other nuclear explosion*" from being carried out "*in the atmosphere; beyond its limits, including outer space*". However, the LTBT addresses activities regarding only nuclear weapons in outer space and does not cover other weapons. (2) The Outer Space Treaty (OST); Paragraph 1, Article IV of the Outer Space Treaty (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies) prescribes that States Parties to the Treaty "*undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner*". This provision bans the deployment of weapons of mass destruction in orbit around the earth, on celestial bodies and in outer space, but does not deal with weapons other than WMD, such as conventional weapons and new types of weapons based on other physical principles. Paragraph 2, Article prescribes that, "*the moon and other celestial bodies shall be used by all States Parties to the Treaty exclusively for peaceful purposes. The establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on celestial bodies shall be forbidden.*" However, this does not include orbits to and around the moon and other celestial bodies. (3) The Moon Agreement; (only 16 countries so far have ratified it, therefore, making it non-universal) Article 3(2) prescribes that, "*any threat or use of force or any other hostile act or threat of hostile act on the moon is prohibited. It is likewise prohibited to use the moon in order to commit any such act or to engage in any such threat in relation to the Earth, the moon, spacecraft, the personnel of spacecraft or man-made space objects*". Article 3 (4) prescribes that, "*the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military maneuvers on the moon shall be forbidden. The use of military personnel for scientific research or for any other peaceful purposes shall not be prohibited. The use of any equipment or facility necessary for peaceful exploration and use of the moon shall also not be prohibited.*" This provision prohibits only tests and use of weapons of any kind on the moon, and the use of such weapons from the moon against the earth, spacecraft and the personnel. However, activities of such kind in the moon orbit and in outer space other than the moon are not covered. Article 3(3) prescribes that, "*States Parties shall not place in orbit around or other trajectory to or around the moon objects carrying nuclear weapons or any other kinds of weapons of mass destruction or place or use such weapons on or in the moon*". This provision bans only the deployment of weapons of mass destruction on the moon and its orbit, but does not deal with weapons of other kinds (conventional). The Anti-Ballistic Missile Treaty of 1972 required not to develop, test or deploy space-based anti-missile systems. The treaty became null and void when the US withdrawal decision entered into force on June 13, 2002.

Jiang Zemin[12] indicated in a December 2002 speech to the expanded Central Military Commission (CMC) that space would be of growing importance in the context of the ongoing Revolution in Military Affairs (RMA). This increasing role of space is further noted among the new "historic missions," as pronounced by Hu Jintao. "Historic missions" imply a more capabilities-oriented perspective, rather than a contingency-based one, as it prepares to safeguard the security of the Communist Party of China (CPC) and the People's Republic of China (PRC). The areas of concern for national security have expanded. Where once the People's Liberation Army (PLA) was focussed on defending China's land borders and the CPC, and, to a lesser extent, repelling a seaborne invasion, now it must keep watch over new regions and functional areas. That, in turn, is likely to have ramifications upon all aspects of PLA military planning, including for military operations in space. The following stand out in terms of a capability oriented approach:

- **Space Warfare***:* missile, space plane, and laser-based space weapons
- **Space Information Architecture***:* Surveillance, navigation, communications, and Electronic Intelligence (ELINT) satellites.
- **Anti-Ballistic Missile (ABM) Defences***:* China is most likely developing an ABM system which could be deployed after 2020.
- **Manned Moon Presence:** To secure China's potential military and economic interests.
- **Nuclear Missiles***:* Three types of new solid-fuel intercontinental ballistic missiles and submarine launched ballistic missiles (ICBMs and SLBMs) in or near deployment.
- **Energy Weapons***:* High-power microwave weapons now deployed (lasers to follow?)
- **Fifth Generation Combat Jets***:* Two, possibly three, fifth-generation programmes are underway.
- **Unmanned Combat and Surveillance Jets***:* Three air companies have active programmes.

12. Jiang Zemin, "Discussing the RMA with Chinese Characteristics" in *Jiang Zemin Wenzai (Selected Works of Jiang Zemin)* (Beijing: People's Publishing House, 2006), pp.576-583.

- **Nuclear Submarines***:* New nuclear attack and ballistic-missile submarines now being built.
- **Aircraft Carriers***:* Chinese naval carriers, informally, say four to six may be built.
- **Anti-ship Ballistic Missiles***:* A revolutionary weapon that only China is building
- **Large Amphibious Assault Ships***:* 20,000-ton Landing Platform Dock (LPD) being built and a Landing Helicopter Dock (LHD) in development.
- **Large (60-ton capacity) Airlifters:** Proposals from both of China's air consortia.
- **Airmobile Army Forces:** Developing a new family of airmobile wheeled combat vehicles.

The 1997 *PLA Military Encyclopaedia's* entry on "space warfare" (*tianzhan)* explicitly stated that space was not decisive in the battlefield—the key to war-time victory would remain in the traditional land, sea, and air realms. "It is impossible for it (space warfare) to be of decisive effect. The key determinant of victory and defeat in war remains the nature of conflict and the human factor"[13]. However, in 2002, at the beginning of the Hu Jintao leadership era, the tone had already changed. In the 2002 supplement to the *PLA Encyclopedia*, a very different assessment is made of the importance of space. In its discussion on the "space battlefield (*Taikong zhanchang*)," the entry concludes with the observation that the impact of the space battlefield will become ever greater and the space battlefield "will be a major component of future conflict[14]." It is clear that space, in the interval, was perceived as a substantially more important arena for military operations. In January 2007, the shoot-down of a Fengyun-1C weather satellite made clear that not only has the PRC been engaged in the research and development of anti-satellite

13. Dean Cheng "Prospects for China's Military Space Efforts" in Roy Kamphausen, David Lai and Andrew Scobell, eds., "Beyond the Strait: PLA Missions Other Than Taiwan," *Strategic Studies Institute: US Army War College*. Available at http://www.strategicstudiesinstitute.army.mil/.
14. PLA Encylopedia Committee, *Chinese Military Encylopedia*, Supplemental Volume (Beijing: Military Science Publishing House), 2002, p.455.

weapons, but has reached the point where such systems are being unmistakably tested. One of the more prolific Chinese military space analysts, Senior Col Li Daguang, of the PLA's National Defence University, similarly observed in an article published simultaneously in the *Liberation Army Daily* and *National Defence Daily,* that "**information dominance** (*Zhi xinxi quan*) cannot be separated from **space dominance** (*Zhi tian quan*). It can be argued that seizing space dominance is the root for winning the informationalised war".

It is impossible for it (space warfare) to be of decisive effect. The key determinant of victory and defeat in war remains the nature of conflict and the human factor.

Space dominance has been understood to be a temporary condition even during the course of the conflict. PLA authors note that space dominance is different from the more traditional air or naval dominance. Li Daguang, for example, observes that while space dominance is a prerequisite for air and naval dominance, it is likely to be more expensive and difficult to achieve, because of the uniqueness of the space environment[15]. Moreover, like information dominance, it is more difficult to wholly prevent an opponent from entering space. Therefore, securing and retaining space dominance throughout the course of a conflict is likely to require sustained effort; the alternative is to accept that *space dominance will probably be a more temporary condition.*

The requirement of preparing for local wars under modern high-tech conditions in the 1990s and early 2000s led the PLA to shift towards a more "joint" approach to future wars and campaigns. With the growing importance of information technology, as acknowledged by the need to prepare for *local wars under informationalised conditions*, the emphasis has shifted towards unified operations, incorporating the ability to secure information dominance in order to create a common situational awareness among the disparate forces. In the recent views of PLA analysts, space dominance is essential. This, in turn, suggests that any future conflict involving the PRC is likely to entail military operations that affect the

15. Cheng, n.13.

space system. Where once the PLA could focus primarily on local defence of the homeland, it must now consider how to secure Chinese interests regionally, and eventually even globally. Where once the PLA could focus on protracted wars of annihilation, relying on mass and attrition, now it must be capable of fighting much more abbreviated wars of paralysis that rely on technology and rapid reaction. The PRC's ability to secure space dominance will affect its broader ability to obtain security for itself. The impact of military space operations is not simply, then, the ability to engage a given satellite or deploy a constellation, but increasingly relates to the larger issue of sustaining and supporting the greater national interest. This suggests that PRC and PLA activities in space must be analysed with an eye not only towards war-fighting capabilities, but also in the context of deterrence and doctrine.

China pursues a differentiated strategy, one that seeks limited deterrence in its theatre nuclear force posture and an offensively configured, preemptive, counter-force war-fighting posture in its conventional missile forces[16].At this stage of its development, China's nuclear doctrine does not explicitly distinguish between the two mission sets, "Taiwan" and "beyond Taiwan". China's scant but growing official literature distinguishes between the specific requirements of deterrence vis-a-vis Taiwan (and of the United States and its allies involved in a Taiwan contingency) and the broader mission set. This reflects the top-level guidance to develop capabilities to deal with the generic challenges of "high-tech local war under the conditions of nuclear deterrence[17]."China's requirements of its regional deterrent have resulted in a force structure larger and more diverse than the requirements of its intercontinental deterrent. And, furthermore, China's force modernisation strategy has generated more new replacements for theatre than intercontinental capabilities, so far[18].

16. Ibid.,p. 196.
17. Ibid.,p.196.
18. An analysis of China's missile testing pattern exhibits a higher number and frequency of tests for short range than long range. These observations were expressed as part of the lecture delivered by Kondapalli, n.7.

However, US military planning documents issued during the course of the last decade suggest serious efforts by the US for *control of space* aimed at global superiority on earth[19]. In April 2002, Vice Foreign Minister Qiao Zonghuai summarised the official Chinese view of US plans;

> Considerable progress has been made in outer space-related weapons research and military technology. It will not take long before drawings of space weapons and weapon systems turn into lethal combat instruments in outer space. Meanwhile, military doctrines and [concepts] such as "control of space" and "ensuring space superiority" have been unveiled successively, and space operation [command] headquarters and combatant troops are in the making. If we should remain indifferent to the above-mentioned developments, an arms race would very likely emerge in outer space in the foreseeable future. Outer space would eventually become the fourth battlefield besides land, sea and air. If such a scenario should become reality, it would be virtually impossible for mankind to continue their anticipated exploration, development and utilisation of outer space, and all economic, cultural and social activities in connection with the utilisation of outer space would be severely interrupted[20].

The scope of space weaponry, generally accepted by many Chinese includes *not only* weapons stationed in outer space, but also weapons based on the ground, at sea or in the air that target objects in outer space. Outer space objects, in the Chinese definition, include not only satellites but also ICBMs travelling through outer space[21]. For example, the Chinese believe that the current Ground-based Mid-course Defence (GMD) system deployed

19. In its 2003 report, "Transformation Flight Plan", the US Air Force lists a number of space weapon systems desirable in the event of a space war. *US Air Force Transformation Flight Plan, 2003.* See: http://www.af.mil/library/posture/AF_TRANS_FLIGHT_PLAN-2003.pdf. These include space-based kinetic kill vehicles.
20. Qiao Zonghuai, "An Effective Way to Prevent an Arms Race in Outer Space: The Early Negotiation and Conclusion of an International Legal Instrument," speech presented at the China/UN Disarmament Conference, April 3, 2002, http://www,fmprc.gov.cn/eng/29794.html.
21. Liu Huaqiu, ed., *Arms Control and Disarmament Handbook (*Beijing: National Defence Industry Pub., 2000).

in Alaska is more of a space weapon. It is typical of Chinese understanding which claims that the Ballistic Missile Defence (BMD) system, in practice functions more like an ASAT weapon for the lack of the crucial breakthrough technology which enables it to track and kill an incoming ballistic missile while in outer space. Since there is a technology gap in doing so, GMD is an excellent ASAT. Therefore, it is being labelled as a space weapon though it is based on the ground.[22] The Chinese also include an incoming ballistic missile in outer space as an object in space. China, therefore, argues that US plans to deploy a missile defence system are an intentional first step toward the weaponisation of space. Furthermore, the US is pursuing space-based BMD for global engagement capabilities. It is believed that an effective, global-coverage BMD system must start intercepting an ICBM as early as the boost phase, which, under US Missile Defence Agency plans, would entail the use of space-based interceptors. The Chinese believe the US intentions regarding weaponisation of space comprise a clear and present danger for a number of space weapon-related programmes, such as the Near Field Infrared Experiment (NFIRE) satellite and space-based interceptor test-bed. However, the Chinese are clear about the fact that space-based weapons have a few important characteristic features:

- Space-based weapons *cannot* protect satellites.
- Space-based weapons are themselves *as vulnerable as satellites*; and can be attacked by multiple sources (less expensive and asymmetric) based on earth.
- The true aim of US space plans is *not to protect US assets* but rather to *further enhance American military dominance* with the objective of realising its strategic objectives on earth.
- Any space-based weapon system will have to *depend on an offensive doctrine* for the vulnerabilities associated with it (first strike).
- Space weaponisation by the US, in the Chinese understanding, is linked to its global hegemonic tendencies.

22. Hui Zhang, "Chinese Perspectives on the Prevention of Space Weaponization." *INESAP Bulletin* no. 24 December 2004: 25-28 and Fu Zhigang, "Concerns and Responses: A Chinese Perspective on NMD/TMD," *Consultation on NATO Nuclear Policy, National Missile Defense and Alternative Security Arrangements* (Ottawa: September 28-30, 2000).

In particular, China is concerned that the US missile defence network will undercut China's strategic nuclear deterrent. Even a limited missile defence system could neutralise China's fewer than two dozen single-warhead ICBMs that are capable of reaching the United States. China is even more concerned about space-based BMD systems that would be far more dangerous to China's nuclear deterrent than a non-space-based BMD system. In addition, Beijing is worried that the deployment of missile defence systems would further promote a preemptive US military strategy.

China fears that the BMD network would give the United States more freedom and power to intervene in its affairs, including undermining the country's efforts at reunification with Taiwan.

As viewed by Chinese leaders, China's own small strategic nuclear arsenal appears to be a plausible target for US missile defence. China fears that the BMD network would give the United States more freedom and power to intervene in its affairs, including undermining the country's efforts at reunification with Taiwan. Moreover, China is concerned that putting weapons in space would constrain its civilian and commercial space activities. China sees itself as a developing economic space power, dependent on free access to space for financial gain. However, US driven space weaponisation directly threatens this access. Therefore, to protect against the potential loss of its deterrent capability, China could potentially resort to enhancing its nuclear forces. As Hu Xiaodi, China's Ambassador for disarmament affairs, asked, "With lethal weapons flying overhead in orbit and disrupting global strategic stability, why should people eliminate weapons of mass destruction or missiles on the ground? This cannot but do harm to global peace, security and stability, and, hence, be detrimental to the fundamental interests of all states[23].

In China's view, the most effective way to secure assets would be to agree on a space weaponisation ban. Ambassador Hu stated, "If any country is really worried about the possible menace to its space interests, this could

23. Hu Xiaodi, "A Treaty to Prohibit Weapons and War in Space? - Missiles: How Can we Reduce the Dangers They Pose?" *Journal of Nuclear Management*, vol. 30, no.4, Summer 2002.

certainly be alleviated through the negotiation and conclusion of a treaty on the prevention of space weaponisation, as suggested by China... Such a legally binding international treaty will be the best tool to safeguard the interest of all sides[24]." China's stance on banning weapons in outer space has been consistent since 1985, when it first introduced a working paper to the United Nations (UN) Conference on Disarmament (CD). China's most recent working paper on the issue, introduced in June 2002, emphasises three basic obligations: (1)not to place in orbit around the earth any objects carrying any kind of weapons, not to install such weapons on celestial bodies, and not to station such weapons in outer space in any other manner; (2) not to resort to the threat or use of force against outer space objects; and (3) not to assist or encourage other states, groups of states, international organisations to participate in activities prohibited by this treaty[25].

In recent years, the UN General Assembly has adopted resolutions calling for the CD to begin negotiations on the Prevention of an Arms Race in Outer Space (PAROS) with an overwhelming majority of support. However, John Bolton, then US Undersecretary of State for Arms Control and Non-Proliferation, told the CD: "The current international regime regulating the use of space meets all our purposes. We see no need for new agreements[26]. However, the Chinese disagree since there are no existing treaties that effectively prevent the testing, deployment and use of weapons, other than those of mass destruction, in outer space. In addition, none of these instruments covers the threat or use of force from earth (land, sea and air) against objects in outer space. The history of proliferation has taught (us) that banning the testing and deployment of weapons from the outset is much more effective than attempting disarmament and non-proliferation. after the fact.

24. Hu Xiaodi, statement on armament affairs of China at the Plenary of the Conference on Disarmament, June 7, 2001. Available at www.nti.org/db/**china**/spacechr.htm. Assessed on August 17, 2011.
25. China and Russia, together with Indonesia, Belarus, Vietnam, Zimbabwe and Syria, co-sponsored a working paper on "Possible Elements for a Future International Legal Agreement on the Prevention of the Deployment of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects" (CD/1679), June 2002.
26. Statement by John Bolton, US Undersecretary of State for Arms Control and Non-Proliferation, to the Conference on Disarmament, Geneva, January 24, 2002.

The definition of space weapons is contested, and according to Chinese documents, space weapons would include: (1) any weapon stationed in outer space for the purpose of attacking any object in space, on the ground, in the air, or at sea; (2) any space-ground-, air-or sea based weapons that target objects in outer space.

- *Basing of weapons.*
- *Objects in outer space.*

Regarding the basing question, any weapon if stationed in outer space should be classified as a space weapon. This interpretation can easily be widely accepted. Here, the basing of an object in space is the key. As regards the question of what is an object in outer space, if the "object" refers only to satellites, then we can define the scope of the space weapon ban as applying to: any weapons stationed in outer space and any ASAT weapons (focussed approach). However, if the "object" refers not only to satellites but also to missiles traversing space, then space weapons will be defined (broad approach) as any space-based weapons, any ASAT weapons, and any anti-ballistic missile weapons intercepting missiles in outer space. Thus, the "focussed" approach would permit a non-space-based BMD system, while prohibiting a space-based BMD system. However, the "broad" approach would put a strong limitation on US missile defence system development. In its 2001 working paper to the CD on PAROS, China pointed out one of the three basic obligations as "not to test, deploy or use on land, in the sea or atmosphere any weapons, weapon systems or their components that can used for war-fighting in outer space"[27].

The prevailing view in China is that US space weaponisation plans will have disastrous consequences for international security and the peaceful use of outer space. The 2004 White Paper on China's national defence emphasised, "Outer space is the common property of mankind. China hopes that the international community would take action as soon as possible to conclude an international legal instrument on preventing the weaponization of, and

27. Wang Xiaoyu, "Development of Antiballistic Missile System vs. the Prevention of an Arms Race in Outer Space," Presentation at the WILPE Seminar "Prevention of an Arms Race in Outer Space," Geneva, March 10, 1999.

arms race in, outer space through negotiations, to ensure the peaceful use of outer space[28]." In recent years, the UN General Assembly has adopted resolutions—annually, and with an overwhelming majority—calling for the CD to begin negotiations on PAROS. China and other nations have also advocated the negotiation of PAROS at the CD. Despite these efforts, the United States staunchly opposes any official discussion on outer space in this forum. The dispute has resulted in a deadlock at the CD in recent years. To resume and facilitate the CD negotiations on arms control, the issue of space weapons will have to be examined.

China perceives that the United States is pursuing a "space control" strategy. The US has issued a series of official statements in recent years that discuss the vulnerability of US space assets to attack without warning and the need to protect US satellites from all possible threats. The statements propose that the US respond with the forceful domination of space and denial of access to those who may intend harm[29]. Space control includes US access to, and freedom of, operations in space, while denying others the use of space. This mission includes: space surveillance, protection of US space systems, prevention or negation of an adversary's ability to use space systems and services for purposes hostile to US national security interests, and direct support for battle management, command, control, communications, and intelligence (counter-space operations). The negation mission would include "measures to *deceive*, *disrupt*, *deny*, *degrade*, or *destroy* an *adversary's space capabilities*[30]."

In 2001, the report of a special commission on US national security in space, chaired by Defence Secretary Donald Rumsfeld, warned of the need "to avoid a 'space Pearl Harbour."' It was further recommended that the US

28. Information Office of the PRC State Council, "White Paper on China's National Defence in 2004," December 27, 2004, Available at http://www.china.org.cn/e-white/2004-1227/index.htm.
29. Qiao Zonghuai, "An Effective Way to Prevent an Arms Race in Outer Space: The Early Negotiation and Conclusion of an International Legal Instrument," speech presented at the China/UN Disarmament Conference, April 3, 2002, http://www3.fmprc.gov.cn/eng/29794.html.
30. US Joint Chiefs of Staff, *Joint Doctrine for Space Operations,* Joint Publication, 3-14, August 9, 2002. Available at http://www.fas.org/irp/doddir/dod/jp3_14.pdf. Assessed on August 17, 2011.

government...vigorously pursue the capabilities called for in the National Space Policy to ensure that the President will have the option to deploy weapons in space to deter threats to, and if necessary, defend against attacks on, US interests[31]." In its 2003 report, *Transformation Flight Plan*, the US Air Force lists a number of space weapon systems desirable in the event of a space war (*US Air Force Transformation Flight Plan,* 2003). These include;

- Space-based kinetic kill vehicles.
- Space-based lasers.
- Hypervelocity rod bundles.
- Space-based radio-frequency energy weapons.
- Space manoeuvre vehicles.
- Evolutionary air-and-space global laser engagement.

In August 2004, the US Air Force released the doctrine document *Counterspace Operations*, which defines space superiority as the "freedom to attack as well as the freedom from attack" in space. Counter-space operations include offensive and defensive counter-space measures. To preclude an adversary from exploring space to its advantage, offensive counter-space operations would attack, possibly preemptively, an adversary's space capability, including: satellites, space stations, or other spacecraft; communication links; ground stations; launch facilities; command, control, communication, computer, intelligence, surveillance, and reconnaissance systems; and space systems operated by third party providers. As the document indicates, these offensive operations would be conducted using a number of space weapon systems, such as ASATs that "include direct ascent and co-orbital systems that employ various mechanisms to affect or destroy an on-orbit spacecraft," and Directed Energy Weapons (DEWs), such as land-, sea-, air-, or space-based lasers. Professor Du Xiangwan, Vice President of the Chinese Academy of Engineering, claimed that the 2003 *Transformation Flight Plan* indicated that "many types of space-based weapons will be developed" and that "the tendency of space weaponisation

31. *Report of the Commission to Assess United States National Security Space Management and Organisation,* Washington, DC, January 11, 2001. Available at http://space.au.af.mil/space_commission/.

is obvious and serious"[32]. Ambassador Li Daoyu, President of the China Arms Control and Disarmament Association, recently stated, "As we cheer for every success of peaceful exploration and the use of outer space, we also hear the approaching bugling of war. The space military technology is advancing rapidly. New military and combat concepts and theories like 'control of space' and 'occupation of space' are emerging. Research and development programs of space weapons are in implementation. The danger of the weaponisation of, and an arms race in, outer space is ever more imminent[33]."Moreover, the US has withdrawn from the 1972 Anti-Ballistic Missile (ABM) Treaty. Though not party to the treaty, China viewed it as a cornerstone of strategic stability and an important legal instrument for preventing the deployment of weapons in space.

CONCLUSION

The question has more to do with how one analyses the Chinese regime than with anything specifically military. It hearkens back to complex debates among scholars of the history of Germany, which had also made massive attempts to achieve military leadership over the past little more than a century. Some German scholars explain her military build-ups, for example, that of her fleet in the years before World War I, as driven from outside. It was a matter of *Aussenpolitik*—foreign policy—above all, and could have been moderated, whether in the years before World War I or in the period leading up to World War II, by more forthcoming policies on the part of the then great powers. This argument contains truth and it applies, to a degree, to China, which has always regarded itself as the leading civilisation and polity in the world, and seeks to regain it. There is a great deal of Chinese military literature on questions of a general or even nuclear doctrine. But there is no access by foreigners to official documents that

32. Du Xiangwan, "Prevention Pollution in Space", presentation on at the *Symposium on the Sustainability of Space Resources & Technology*, Beijing, April 13-15, 2004.
33. Li Daoyu, "Prevention of the Weaponisation of and an Arms Race in Outer Space: An Urgent Task with No Time to Delay," statement at the UN Institute for Disarmament Research conference on Safeguarding Space Security: Prevention of an Arms Race in Outer Space," Council Chamber, Palais desNations,Geneva,March21,2005. Available at http://www.mfa.gov.cn/eng/wjb/zzjg/jks/kjfywj/t189569.htm.

provide definitive explanations or outline future doctrine or equipment choices. So analysts must devise their best guesstimates based on literature, official statements, actions, interview data, and assessment of modernisation decisions[34].

China's military doctrine reflects the periodic changes in China's threat perception, technological capability and economic development.

China's military doctrine reflects the periodic changes in China's threat perception, technological capability and economic development. There is no official Chinese declaration of its strategic doctrine, except a declared NFU policy. While China views nuclear weapons and ballistic missiles as the currency of power necessary for preserving China's autonomy and protecting China's territorial integrity, it fears that US led weaponisation of space, in the absence of a negotiated space treaty, will alter its doctrine and put in motion doctrinal alterations. It is likely that an increase in the number of missiles, improvements in their ability to penetrate BMD systems, and a larger and more sophisticated submarine-based deterrent are all the possible directions for the future. The ASAT test in January 2007 was a visible demonstration of Chinese intent, capability and determination to counter efforts by other countries to dominate the emerging strategic frontier in "*space*".

34. Fisher D. Richard Jr, *China's Military Modernisation: Building for Regional and Global Reach* (US: Praeger Security International, 2008), p.7.