

Emerging space
capability of china
cultural studies essay



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INTRODUCTION

1. The modern world has witnessed revolutionary changes occurring in the field of science and technology, in spite of vast knowledge and learning being possessed by the human kind from the time immemorial, various important scientific achievements have been concentrated in the history for last hundred odd years only. All scientific breakthroughs such as aeroplane, discovery of atom etc have come with both great promises and peril alike. The revolutionary findings not only changed the style and living standards of human kind but also introduced a strategic change in the conception of military strength and shape the political force. 2. The technological knowhow reached astounding heights with the unfolding of space arena to the human kind. The conquest of space arena, though another milestone in the history of mankind and in development and application of technology, has been now rightly perceived to be possessed of certain unique characteristics. Though space usage was envisaged to be a giant leap for scientific data gathering, space communications, weather forecasting etc, the military thinkers of the world were quick to grasp the limitless penetration of space for contemplating of its usage for strategic military applications as well. 3. Traditionally USA and USSR were foremost players who measured space programmes in terms of power politics, but after the cold war era many other countries like China , India, France and Japan etc also have jumped into the fray. China our immediate neighbour has quietly built up a credible space infrastructure. The highly secretive space programme of China has proceeded unabatedly for no of decades now. Many of China's space programs are deemed to be civilian, but have dual use,

especially with regard to military capabilities. Improved trends in China to unabatedly wage a network centric war with technologically superior forces without having to cross into the agreed boundaries is source of concern for its potential adversaries, particularly India. It is therefore imperative for India- a space capable progressive nation to address the issue of future impetus in space militarisation and to plan a definite roadmap to counter the same.

AIM

4. To identify and analyse the threats emanating from the Chinese space programme. To analyse its implications for India & suggest definite roadmap to counter the same.

METHODOLOGY

STATEMENT OF PROBLEM

1. General Subject: Chinese space strategy. 2. Specific Topic: Emerging space capabilities of China and its implications on India. 3. Statement of the Problem: To identify and analyse the threats emanating from the Chinese space programme. To analyse its implications for India & suggest definite roadmap to counter the same.

HYPOTHESIS

4. Space based activities, with their immense potential for helping regional and global development, have gradually found its importance in many countries of the world today. Over the past three decades, China has emerged as a major player in space arena with millions being invested into the sector. Barring specific aspects, a series of Chinese success ranging from

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the January 2007, Anti-Satellite test and the recent space walk mission have compelled many to scrutinize its future course in space. Given the Chinese Military's control over its space programme, the issue of space as a source of military power becomes more poignant, especially to its neighbours like India. In such a scenario, with countries around it building up its space based infrastructure, India with a stated space policy aimed at promoting peace and prosperity requires to build up specific defensive measures in the future to safeguard its space based infrastructure and ensure regional strategic balance.

Justification of Research

5. Since the 1970's, Chinese leaders have seen space programmes as a tool to speed technological modernisation and recognition of China as a great power. More recently General Xu Qiliang, the commander of People's.

Liberation Army. Air Force, has articulated that space exploration is decisive to China's national stakes. His remarks reflect the Chinese governments growing interest in space technology. Public recognition of China's long standing and ambitious space programme increased dramatically with the orbit of taikaonaut around the earth. The orbital mission was an assertive step in showcasing the progress of Chinese space programme to the world.

6. The Chinese focus on economic development whilst improving military technologies is particularly evident in the space sector. The current satellites are predominated by dual use systems, such. as meteorological, communications and remote sensing satellites. Equally important is China's policy of acquiring technology through cooperation with other countries, along with direct purchase. This has been done in the field since it is hard to

distinguish civilian and military space systems. The relative success of China in this regard means that it is likely that it will continue to do this in the future in order to broaden its development of its space systems. This will have corresponding benefits to the military space sector. 7. In contrast to the secretive Chinese space policy, the Indian space programme has remained highly open and focussed towards peaceful use of space technology. ISRO is in a business of space for socio-economic development. Though some of the Indian space programmes too, offer dual use, however they remain largely restricted to communication and reconnaissance purpose. Hence it is difficult to categorize and compare Indian and Chinese space programmes, particularly because of China already demonstrating its intent to weaponise space by conducting the 'anti satellite test'. 8. Space presents both opportunities and dangers. The opportunities is what Indians are using it for like communications, weather forecasting, remote sensing etc and the dangers stem from possible weaponisation of space which the Chinese are actively seeking. India as a relatively advanced space faring nation, has considerable experience in manufacturing and operating space based assets. It is important to assess the requirement of reviewing our space policy to understand the changing domain of space security as also to counter the growing Chinese threat on a frontier which has no stated boundaries.

Scope

9. The broad scope of research will cover the following issues:-(a)Space as a realm of warfare.(b)Outer Space : A Strategic Security Asset.(c)Evolution of Chinese Space Pgme.(d)Emerging Chinese Space Programmes and policies.

(e) Comparison of India and China in Space. (f) Implications for India. (g) Way Ahead.

Method of Data Collection.

10. Books. (a) Space Warfare & Indian Strat by Brig AK Lal. (b) Space Security: Indian Perspective by Gp Capt(Retd) G D Sharma, VSM. (c) Space weapons – The arms Control Dilemma by Bhupendra Jasani. (d) Countdown to space war by Bhupendra Jasani. (e) The New high grnd by Thomas Karas. (f) Outer Space & Mil supremacy by Kailash Thakur. 11. Internet and Articles. (a) Chinese threat to Indian Space assets , an article by Radha Krishan Rao in [http://www. domain-b. com](http://www.domain-b.com). (b) United Nations Committee on peaceful uses of outer space in [www. oosa. unvienna. org](http://www.oosa.unvienna.org). (c) Rajat Pandit. An article on " Dedicated Satellite for Navy by year end in Times of India of 20 May 2010. (d) The Freedom of Space Doctrine, at [www. Americanforeignrealtions. com](http://www.Americanforeignrealtions.com). (d) Bryan Johnson " The Military Use of Space" at [www. suite101. com](http://www.suite101.com).. (e) Space Debate available at [www. spacedebate. org](http://www.spacedebate.org). (f) White paper on China's national defence, [www. china. org. cn](http://www.china.org.cn). (g) China's attitude towards Outer space weapons at [www. nti. org](http://www.nti.org). (h) China, Space weapons and US security [www. cfr. org](http://www.cfr.org). (j) Mary c. Fitzgerald. " China's Military strategy in space" at [www. hudson. org](http://www.hudson.org). (k) Lisa Dome, " Chinese space policy collaboration or competition". An article published in Centre for Strategic and International studies. [www. csis. org](http://www.csis.org). (l) Asley J Tellis, " China's Military space strategy" at [www. carnegiceendows. org](http://www.carnegiceendows.org). (m) Indian Space Research Organisation at [www. isro. org](http://www.isro.org). (n) Success of Cryogenic Rocket will make India a leader in rocketry economics. An article in Times of India. (o) Barry D Watts, Centre for Strategic and Budgetary assessment, Feb 2001 " The

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Military use of Space, a diagnostic assessment" at www.csbaonline.org.
(p)Amitav Mallick, " Militarisation of space : Security implications" CLAWS journal winter 2008.(q)" Now a space cell to keep an eye on China plans" a news report in Times of India of 11 Jun 2008.(r)Mr Richard A Bitzinger, A Asia Pacific security study titled, Civil Military Integration and Chinese Military modernisation" at www.apcss.org.(s)Ashley J. Tellis, " Punching the US military's soft ribs: China's Anti-Satellite Weapon test in strategic perspective" at www.carnegieendowment.org.(t)Defence Space Vision 2020 at www.mod.nic.in.(u)The Strategic use of Outer Space, the French white paper on defence and national security, www.globalsecurity.org.(v)Military uses of space in POSTNOTE Dec 2006, Number 273, at www.parliament.uk.

Organisation of Dissertation

12. It is proposed to present the research under following chapters :-

(a)Chapter 1. Introduction.(b)Chapter 2. Space as a realm of warfare.

(c)Chapter 3. Outer Space : A Strategic Security Asset.(c)Chapter 3.

Evolution of Chinese Space Pgme.(e)Chapter 4. Emerging Chinese Space

Programmes and policies.(e)Chapter 5. Comparison of India and China in

Space(f)Chapter 6. Implications for India.(g)Chapter 7. Way ahead.(h)Chapter

8. Conclusion.

CHAPTER II

SPACE AS A REALM OF WARFARE

1. The limitless and vast expanse of space has been a source of both imagination and interpretations, however with the USA and USSR kick starting the space race in the early nineteenth century, space has come to

be known with immense commercial and scientific potential. Use and dependence on space technologies and space assets have been on a steady increase but there has been careful restraint of not putting any weapon in space so as not to disturb the international consensus on preserving the outer space as a " common heritage of mankind," as was agreed vide Outer Space Treaty of 1967. Therefore, scientific and commercial endeavors have been able to develop with minimal concern about military interference or any direct military implications.[1]This system of international co-operation has been working well, however with countries realizing the potential of dual use of space technology , the space arena has seen a gradual shift towards technology which affects and enhances the nation's military capabilities. Integration of outer space capabilities in security and war fighting doctrine have changed the nature of warfare as well as the security perceptions around the world, signaling the dawn of new era of leveraging " space superiority" for international power balance equations. Consequently, there is a new momentum to increasing militarization of space for diverse functions such as strategic and battlefield surveillance, command, control, communications, intelligence(C3I), navigation and guidance and even for terrestrial weapon targeting, as demonstrated by the US in the Iraq war. [2]As a consequence of the far reaching, military, political and economic ramifications of this far impending technological transformation in outer space, many countries including India and China have gradually built up their space capabilities gradually, though for varied strategic reasons. 2. General Xu Quilang , the commander of People. Liberation Army. Air Force, has argued that space exploration is critical to China's national security interests. His comments reflect the Chinese government's developing pursuit in space <https://assignbuster.com/emerging-space-capability-of-china-cultural-studies-essay/>

exploration and exploitation of space applied science. China's space programme has made substantial advancement over the past decennium. China planned to commence construction its own space station in 2011 with the launching of an unmanned module named Tiangong-1. China's success is partly due its power to exploit foreign technology and its cooperation with foreign governances.[3]3. According to Chinese, the United States & Russia are engrossed in a endeavor to develop ground, air, & space based weapons for achieving space dominance. These are said. to include ground. based kinetic & airborne Anti Satellite (ASAT) System, high altitude anti missile weapons, space weapon platforms, aerospace. aircraft, & space combat aircraft designed to execute. simultaneous space & ground strikes. 4. The Chinese also charge that United States is developing " some new concept weapons" for its 21st century. space force, including kinetic, directed-energy, & non anti personnel weapons. Kinetic energy weapons are ultra. high. speed warheads with extremely high. kinetic energy.. such as. electromagnetic cannons & intelligent intercepting bombs to. collide with & destroy. targets. directly. Directed energy weapons can be used not only to destroy various ground targets & flying targets such as ac, ballistic missiles, satellites, & space stations, but also both in electronic warfare & photo electronic warfare. 5. The Chinese agenda for space weaponry including the " new-concept" weapons, which will make outer space the fifth. Dimension. Operational. Space. after land, sea, air & electromagnetism. 6. Because the space theatre of war is in outer space & more. than 120 Km above. the earth's. surface, there are no restrictions. concerning national. boundaries & sovereign air space. The side owning space. dominance, say the. Chinese, can therefore. exercise complete. freedom of. action. The use of space based

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weapons sys to strike Endo. Atmospheric. air, land & sea targets. demonstrates. a unique superiority. 7. These unique, high-altitude. advantages of space.. have. strategic & decisive significance. for the side exercising. space dominance. If strike weapons. are deployed in. space, it will be possible to accomplish. such. offensive ops as satellite attack, missile intercept & ground fire power sp. It will be possible to guarantee the optional independence of friendly mil space forces, & to translate these advantages into info, air and sea dominance. Without space ascendancy, say the Chinese, one is in reality. casting oneself in the inexpedient position of " being shot down first & then taking up arms." 8. China is presently focusing on space support(eg launch & satellite maintenance) and force enhancement China's futuristic planning including landing on moon by 2018. 8. By analyzing Chinese space & counter space capb & their implications on India, it is imperative for India to boost its space pgme to counter Chinese space capb. It is evident from various papers & news agencies that China is enhancing its space capb to bring the United States to negotiating table for weaponisation of space. However, India should also review it critically for its national security. Article by Amitav Mallick: Militarisation of Space: Security Implications in CLAWS journal, winter 2008. Chinese Space Policy: Collaboration or Completion? Published by Centre for Strategic & International studies on 23 Mar 2010.