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發行人：謝勇維

主編：荊元宙

執行編輯：陳育正

編輯委員：(按姓氏筆畫排序)

王宏仁、孫懋嘉、郭育仁、許智翔、

張凱銘、游智偉、黃秋龍、顧志文

助理編輯：梁英翔

行政人員：呂明逸

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事務研究所

地址：臺北市北投區中央北路二段 70 號

電話：(02)2893-3810

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發行人序言

自 2019 年起，《中共解放軍研究學術論文集》經過發行人、主編與編輯部的不懈努力，已成為一本定期出版的專業期刊，並即將迎來第五期的發行。這一轉變不僅累積豐富的研究成果，也建立一個國際學者交流的平台，特別是在研究中共軍事問題上。

為了不斷提高刊物的質與量，進一步增強研究與交流的成效，本期刊物經過的徵稿和匿名審查流程，精選七篇關於中共軍事戰略和政策的深度分析文章。依序包括〈運用大數據方法分析中國大陸聯合作戰研究現狀及趨勢〉、〈中共有缺陷的海洋戰略及其對印太區域的影響〉、〈今日烏克蘭，明日臺灣：分析中共可能入侵臺灣的情況〉、〈中美大國競爭與共軍的現代化：評估日本防衛政策及其影響〉、〈中共太空站建設的軍事應用〉、〈中共灰色地帶行動對日本的影響〉、〈中共對俄烏戰爭的看法及其對臺未來軍事行動的啟示〉。

這些文章從不同角度反映中共在軍事和

戰略領域的多維發展，呈現出當前戰爭和地緣政治的複雜性。無論是從大數據應用在中共軍事戰略發展趨勢，到中共海洋和太空戰略的探索，甚至是從中共對臺灣的潛在威脅，到美中全球權力競爭的分析，以及中共對日本進行的灰色地帶行動，這些主題不僅聚焦於中共軍事現代化及其在多個領域的策略，也觸及對區域乃至全球安全的影響。透過這些精闢分析，能加深我們對於中共日益增長的軍事能力和戰略態勢的理解，從而反思臺灣應有的應對之道。

在此，我特別感謝中共軍事事務所荊元宙所長在本期刊物出版過程中對編輯團隊和貢獻者的指導和支持，並衷心期待學術界的持續支持與鼓勵，以推動更多有價值的研究發表和學術交流。

政戰學院院長 謝勇維 謹識

2024 年 3 月 5 日

目次

1. Utilizing Big Data Methodologies to Analyze the Current Status and Trends of Joint Operations Research in the PRC.....	1
2. China's Flawed Maritime Strategy and Its Implications for the Indo Pacific.....	41
3. Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion of Taiwan.....	85
4. US-China Great Power Competition and the PLA Military Modernization: Evaluation of Japan's Defense Policy and Its Impact.....	137
5. The Military Applications of China's Space Station Construction.....	169
6. The Impact of China's Gray Zone Operations on Japan.....	203
7. China's Vision of the Russian-Ukrainian War in Light of Its Future Military Actions against Taiwan.....	235

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

Utilizing Big Data Methodologies to Analyze the Current Status and Trends of Joint Operations Research in the PRC

Jhih-siang Liu

(Assistant Professor, Graduate Institute of China Military Affair Studies,
National Defense University)

Abstract

This study employs big data methodologies to investigate the current state and trends of joint operations research in the People's Republic of China (PRC) from 2000 to 2022. Latent Dirichlet Allocation (LDA) topic analysis is conducted on journal articles from the China National Knowledge Infrastructure (CNKI) database, followed by a bibliometric analysis using CiteSpace.

The topic modeling reveals a predominant focus on macro-level international and regional security issues, with comparatively less attention given to tactical methods and techniques. The bibliometric analysis indicates a gradual shift in recent research trends from a technical perspective to practical applications in real combat scenarios.

Furthermore, a preliminary citation network among authors has begun to emerge, although a cohesive research cluster is yet to be established. The study

acknowledges its limitations and recommends incorporating diverse research perspectives, expert interviews, and case studies to validate the findings derived from the initial big data analysis.

Keywords: joint operations, bibliometrics, CiteSpace research hot spots, research trends

I Introduction

In the present tumultuous stage of international politics, The PRC military strategies and developments are increasingly becoming the focal point of global security and strategic studies. Particularly in the backdrop of the recent outbreak of war between Russia and Ukraine, a deep understanding of joint operations is becoming especially important. Joint operations represent a complex military strategy involving the collaborative efforts of multiple military departments and forces to achieve specific strategic objectives. This form of warfare emphasizes not only the power and strategy of a single armed force but also underscores the importance of collaboration, strategic integration, and diversified combat capabilities. In the conflict between Russia and Ukraine, we can observe various facets of joint operations strategies, including intelligence sharing, coordinated use of diversified armed forces, and the role of psychological warfare.

Against this backdrop, studying The PRC joint operations strategies emerges as a pressing topic of focus. The PRC has made significant advancements in military modernization and strategic planning in recent years. Through deep analysis

utilizing the CiteSpace tool, this study aims to unveil the current status and primary trends in The PRC joint operations research, endeavoring to understand the future directions in this field.

CiteSpace is a dedicated research visualization tool capable of revealing core trends and hot topics in a specific research domain. Leveraging this tool allows for a better understanding and interpretation of the research context of The PRC joint operations, identifying main research groups and directions in this field. Consequently, to deeply understand the current developments and future trends of system technologies in joint operations, this study attempts to employ bibliometric methods using the bibliometric software CiteSpace to systematically analyze journal article data from the "China National Knowledge Infrastructure "CNKI" database from 2000 to 2022.

¹The goal is to discern research hotspots, directions, and the state of related technological developments, striving to understand and uncover the academic community's research status and future trends in the "Joint Operations" research context over the

¹ For more information on “bibliometric methods”, refer to Anton Ninkov, Jason R. Frank, and Lauren A. Maggio, "Bibliometrics: methods for studying academic publishing," *Perspectives on Medical Education*, Vol. 11, No. 3 (June 2022): 173-176.

Utilizing Big Data Methodologies to Analyze the Current Status and Trends of Joint Operations Research in the PRC
past 22 years, aiming to provide a reference for future academic research in related fields.

The main research questions to observe and explore are:

Research Question 1 aims to answer:

What are the thematic patterns in "Joint Operations" research papers?

Research Question 2 endeavors to analyze:

What are the research hotspots and developmental trends in joint operations through bibliometric analysis of keywords and authors?

II Literature review

This study attempts to employ big data topic analysis and bibliometric analysis techniques to deepen our understanding of a large array of research literature. This approach allows us to centrally categorize related literature, track thematic content and proportions, highlight keywords across different years, and analyze citation relationships between various documents. In this way, we can macroscopically observe changes in research hotspots and development trends, thereby overcoming issues and shortcomings possibly encountered in individual studies.

The PRC has become a global leader in conducting research using CiteSpace, with initial analyses being carried out on a range of critical military topics including "military psychology,² military defense architecture,³ information security risk,⁴ military hygiene and medicine,⁵ target tracking,⁶ and swarm intelligence.⁷" Such research not only unveils current research hotspots but also provides a framework for China to plan and implement its military operations and solutions with more strategy and efficiency.

² Wei XIN, Erqing LEI, Erqing LEI, Xiao Chang, Yunyun SONG and Danmin MIAO, "The Application of knowledge mapping in military psychology: Citespace analysis based on data from ISI Web of Science database." *Advances in psychological science*, Vol. 22, No. 2, 2014, pp. 334-347.

³ Du Xianning, Wang Di and Wu Jing, "Frontier of Military Defense Buildings in the Western Regions of the Han and Tang Dynasties Based on CiteSpace," *Journal of Landscape Research*, Vol. 14, No. 6, December 2022, pp. 50-52.

⁴ Li, Xiaotong, and Hua Li. "A visual analysis of research on information security risk by using CiteSpace." *Ieee Access*, No. 6, 2018, pp. 63243-63257.

⁵ Zhang, Xuan-ming, et al. "Knowledge mapping visualization analysis of the military health and medicine papers published in the web of science over the past 10 years." *Military medical research*, Vol. 4, No. 1, 2017, pp. 1-10.

⁶ Li, Zixuan, and Xiaolong Li. "Target Tracking Research Hotspots and Frontier Trends Based on Citespace." 2021 5th Annual International Conference on Data Science and Business Analytics (ICDSBA). IEEE, 2021, pp. 520-526.

⁷ Zhang, Qian, Aihua Yang, and Lina Qin. "Research of Hotspots and Emerging Trends in Swarm Intelligence (2013-2022): A Visualization Analysis based on Citespace." 2022 8th International Conference on Big Data and Information Analytics (BigDIA). IEEE, 2022, pp. 139-144.

Utilizing Big Data Methodologies to Analyze the Current Status and Trends of Joint Operations Research in the PRC

In summary, it is clear that a series of preliminary explorations have been completed in the application of CiteSpace in the military field. However, it is undeniable that current research on the topic of "Joint Operations" in The PRC remains in an immature stage. Bearing this in mind, this study aims to fill this research gap, offering a more comprehensive and deepened analysis of the "Joint Operations" topic in The PRC. We propose to delve into and interpret the research hotspots and trends of "Joint Operations" by utilizing the CiteSpace bibliometric software to analyze related journal articles published in the "China National Knowledge Infrastructure "CNKI" since 2000. This analysis seeks to visualize the research context of "Joint Operations," providing a clear and insightful perspective to understand the current status and future developments in this field.

III Research methods

In our quest to dissect the complex realm of "Joint Operations" research in the PRC from 2000 to 2022, this study embarked on a comprehensive data collection journey. Utilizing the vast repository of academic articles in the China National

Knowledge Infrastructure CNKI database, we engaged in a detailed data analysis process, employing advanced computational techniques.

Initially, our focus was on the CNKI database, targeting scholarly articles within the thematic realms of 'Joint Operations' and 'Military.' This approach was bounded by a specific time frame, spanning from January 1, 2000, to December 31, 2022. This temporal scope was chosen to capture a broad and varied dataset, reflecting the evolving nature of joint operations research in the PRC over these two decades. In maintaining the integrity of our research sample, we meticulously filtered the data, excluding entries lacking author details or containing redundancies, ultimately consolidating a robust collection of 345 journal articles.

Transitioning to the next phase, Python was employed as a tool for in-depth data analysis.⁸ This step was crucial for refining the dataset, removing stop words and irrelevant elements to

⁸ In this study, Python, a high-level programming language known for its versatility and extensive libraries for data analysis, was utilized to conduct in-depth analysis on the dataset. Python's powerful data manipulation and machine learning capabilities, coupled with its readability and ease of use, make it an ideal tool for researchers to process and analyze large volumes of text data, such as the journal articles collected from the CNKI database in this study.

enhance the analytical depth of subsequent stages. With a refined dataset, we utilized the Latent Dirichlet Allocation (LDA) machine learning algorithm, identifying five distinct thematic clusters within the joint operations domain. This categorization facilitated a thorough exploration of each topic, illuminating their intricate aspects.

In the final analytical phase, we utilized CiteSpace software,⁹ version 6.2.R5, to create a scientific knowledge map reflecting the intellectual terrain of joint operations research in the PRC. Following a rigorous data preprocessing routine using the CiteSpace data format converter, this stage evolved into an

⁹ CiteSpace, also known as "Citation Space," is an excellent tool software developed by Chinese-American scholar Chaomei Chen from Drexel University. It was founded on the theoretical framework of scientometrics, data, and information visualization and is extensively applied in academic domains to visualize and analyze citation relationships in scholarly articles. Through this software, researchers can effortlessly identify hotspots and trends between different studies, as well as their evolutionary process. Specifically, CiteSpace represents the number of citations each research receives through the size of the nodes, thereby indicating the significance or influence of that research. Simultaneously, it depicts the strength of network relationships between different research through the thickness of the connections, providing researchers with an intuitive way to understand the relationships and interactions between different studies. Refer to: Chaomei Chen, "CiteSpace: Detecting and visualizing emerging trends and transients," *Science and Technology*, 2006, Vol. 57, No.3, pp.6-9; Jie Li, Chaomei Chen, "CiteSpace: Scientific Text Mining and Visualization" (Capital University of Economics and Business Press, Third Edition, March 2022, pp.2-3).

extensive analytical exercise. Analyzing data from 2000 to 2022, segmented into annual intervals, this analysis highlighted the dynamic interactions among keywords, authors, and institutions, interpreted through the cosine algorithm to elucidate network node associations.

However, it is crucial to acknowledge the research limitations posed by the CNKI database and the PRC's blockade of certain papers. This blockade potentially restricts access to a complete set of data, particularly regarding the People's Liberation Army (PLA) joint operations, thus posing a challenge to the comprehensiveness of our research. Additionally, the specific PLA terminology used for joint operations, such as Joint Operations (聯合作戰), Integrated Joint Operations (一體化聯合作戰), and system warfare (體系作戰), may have influenced the scope and findings of our study. These limitations are critical in understanding the context and potential gaps in our research.

This comprehensive analytical journey, marked by three meticulously executed stages, not only identifies research hotspots and collaborative networks but also establishes a detailed knowledge graph. This graph serves as a guiding light for future research in this field. By revealing the interconnected

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

topics and collaborative networks, this study lays a foundational framework for scholars aiming to delve into the vibrant domain of joint operations research in the PRC, heralding a new era of insight and scholarly inquiry in this critical area.

IV. Research Result¹⁰

Based on the above discussions, we first conducted a topic model analysis on the samples to answer the question, "What are the thematic patterns in the joint operations research papers?"

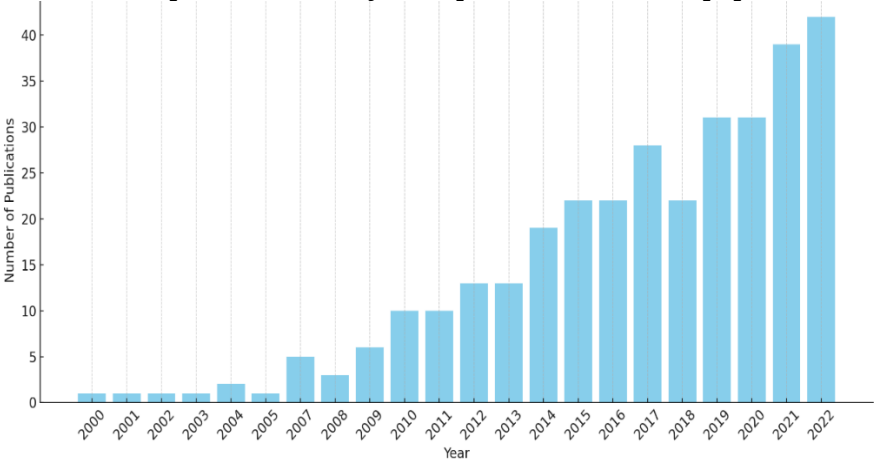


Figure 1: Trend chart of publication trends of joint operations papers
from 2000 to 2022

Data Source: Data imported from CNKI.

1. LDA Topic Modeling Analysis

¹⁰ Please refer to the appendix of this document for the related original data.

First, observe the number of papers published on joint operations from 2000 to 2022. Overall, the number of publications is increasing year by year (see Figure 1). Continue to Utilizing LDA machine learning, we identified and classified topic models in the content of 345 joint operations papers. The LDA algorithm, using Bayesian probability based on the bag-of-words model concept, referred to the keywords of each category to name and identify five major themes. Below is a detailed analysis and explanation of each theme:

(1) Theme 1: International Security Framework and Joint Forces

Number of papers: 190

Proportion: 55.07%

This theme encompasses several facets including the security framework, communication, and assessment. It reflects a trend where scholars are increasingly focusing on the role and impact of international cooperation and multipolar forces when studying the PRC's joint operations. This indicates a strong inclination to explore and understand the position of joint operations in a broader international security framework.

(2) Theme 2: Maritime Safety and Regional Policies

Number of papers: 58

Proportion: 16.81%

This theme highlights the central position of maritime safety and regional policies in joint operations research, especially concerning China's relations with Japan and other neighboring countries. This may indicate a persistent research trend emphasizing the importance of regional stability and cooperation.

(3) Theme 3: Collaborative Framework and Manpower Operations

Number of papers: 17

Proportion: 4.93%

This theme reveals a relatively smaller research area focused on collaborative frameworks and manpower operations. It represents a research field that awaits further development, particularly in exploring how to coordinate and mobilize various resources more effectively for joint operations.

(4) Theme 4: Combat Methods and Equipment Selection

Number of papers: 54

Proportion: 15.65%

This theme involves tactical methods and equipment selection. Despite being a topic directly related to defense technology, it has a relatively smaller number of papers. This might indicate that current research is more focused on broader strategic and policy issues rather than specific tactics and equipment choices.

(5) Theme 5: Military Simulation and Battlefield

Environments

Number of papers: 26

Proportion: 7.54%

This theme concentrates on the study of military simulations and battlefield environments, with a comparatively smaller number of papers. It can be interpreted as the current research on military simulation technology and real battlefield environments still being in its infancy, or it might indicate a larger trend where a significant direction in war studies is shifting towards more strategic and theoretical research rather than a deepening of technology and simulations.

Utilizing Big Data Methodologies to Analyze the Current Status and Trends of Joint Operations Research in the PRC

Overall, we can observe a clear trend in the current state of joint operations research in the PRC, with more research focusing on macro-level international and regional security issues, and less on specific tactical methods and technologies. This suggests that there is ample room for exploring and deepening topics related to defense technology in the future, especially in the fields of combat methods and military simulations.

2. Current Analysis on Hotspots and Development Trends in The PRC's Joint Operations Bibliometric Research

Next, addressing research question two, we aim to analyze the hotspots and development trends in bibliometric research of joint operations, focusing on keywords and authors.

(1) “Keyword” bibliometric analysis

Based on the aforementioned research methods, after conducting the data analysis, click "Visualize" to enter the keyword co-occurrence analysis.

A. Keyword Clustering:

Given the numerous and dispersed keywords in a research field, it hampers the overarching grasp of the developmental

direction. In contrast, clustering analysis is a scientific analysis method that efficiently utilizes vast information and excavates features. It can derive important cluster labels, better indicating the direction of research hotspots. Moreover, it enables the presentation and analysis through a timeline, showcasing different developmental trends over time. Utilizing CiteSpace to explore keyword nodes from 2000 to 2020 in related papers on joint operations for co-occurrence and clustering, and drawing a timeline method to select the top nine largest clusters with 272 nodes; the network Q value is 0.9745, showcasing a significant network graph structure. It presents a clear keyword clustering structure. Organizing the related information to create a temporal graph reveals that the nine clusters including "Complex Network,¹¹ Joint operation, effectiveness evaluation, cyber war, unmanned surface vehicle, satellite information supports, multi-agent planning, magnetic levitation, and battlefield damage assessment" are the hotspot research directions in this field (as

¹¹ In the context of joint operations research, the term "Complex Network" refers to the intricate interconnected systems and infrastructures required for effective C4ISR capabilities. These complex networks encompass various technological components, data streams, communication channels, and information sharing mechanisms that enable seamless coordination among different military branches and operational units during joint operations.

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

shown in Figure 2). Below, each cluster and keyword are explored and analyzed:

(a) Cluster 0: Complex Network

Size: 14

Keywords: complex network, research progress, C4ISR
structure, armament system of systems, complex
networks

Analysis: The "Complex Network" cluster delineates the cardinal role of intricate network structures in the sphere of joint operations, with a pronounced focus on Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) system structures and armament system of systems. The exploration within this cluster is pivotal for enhancing the comprehension and augmenting the efficiency of joint operations, especially in a modernized military environment.

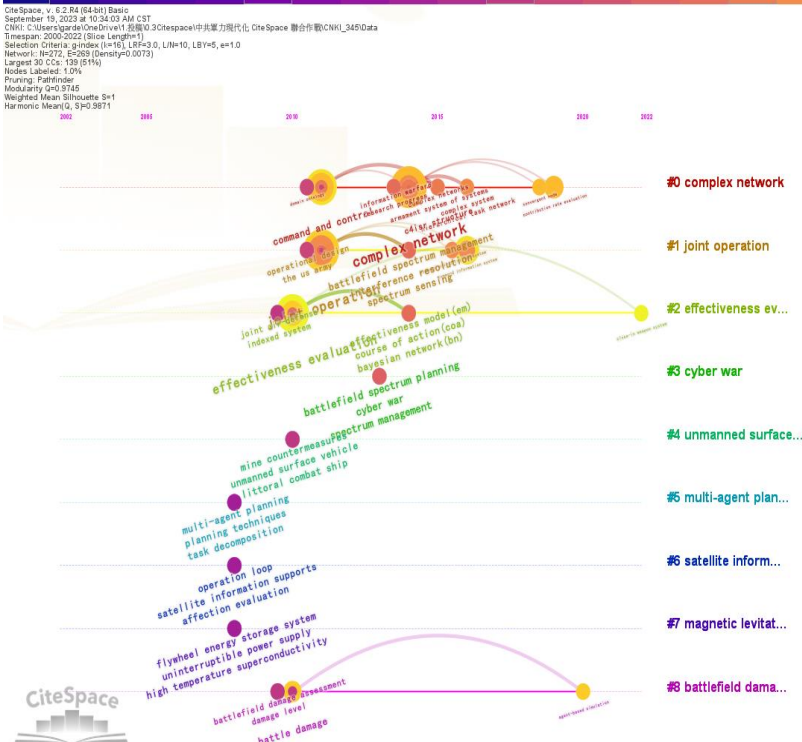


Figure 2: Timeline Map Analysis of Keyword Clustering in Joint Operations Research in The PRC

Data Source: Compiled by this study.

Cluster 1: Joint Operation

Size: 11

Keywords: joint operation, battlefield spectrum management, operational design, command information system, the US army

Analysis: This segment accentuates the multifaceted dimensions of joint operations, encompassing

battlefield spectrum management and operational design. Moreover, it offers a comparative perspective by exploring synergies and differences with the U.S. army, thereby furnishing a nuanced understanding and evaluation of strategies and technologies pertinent to joint operations.

(b) Cluster 2: Effectiveness Evaluation

Size: 10

Keywords: effectiveness evaluation, indexed system, information apperceiving system, joint air-defense, effectiveness unit

Analysis: The "Effectiveness Evaluation" cluster underscores the imperative of holistic evaluations in discerning the efficacy of strategies and technologies in joint operations. It encompasses an understanding of the roles of information perception systems and joint air defenses, highlighting the methods of evaluating operational effectiveness.

(c) Cluster 3: Cyber War

Size: 6

Keywords: battlefield spectrum, cyber war, net-centric war, battlefield spectrum planning, situation awareness

Analysis: This cluster brings to the fore the quintessential role of cyber warfare in contemporary conflict scenarios. Keywords such as "battlefield spectrum" and "situation awareness" underscore the dynamism of battlefield environments and the paramountcy of information warfare, elucidating the necessity for adept cyber warfare strategies in modern conflicts.

(d) Cluster 4: Unmanned Surface Vehicle

Size: 5

Keywords: unmanned surface vehicle, unmanned combat system, surveillance and reconnaissance, littoral combat ship, mine countermeasures

Analysis: This cluster emphasizes the pivotal role of unmanned surface vehicles and combat systems in modern warfare. It highlights the central role of unmanned systems in surveillance, reconnaissance, and mine countermeasures,

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

underscoring the critical role of technological
innovations in enhancing the efficacy of joint
operations.

(e) Cluster 5: Satellite Information Supports

Size: 5

Keywords: satellite information supports, complex network
theory,

operation efficiency, affection evaluation, operation loop

Analysis: This segment delineates the crucial role of satellite
information supports in augmenting operation
efficiency and advancing complex network theory
research. It accentuates the central function of satellite
technology in modern joint operations, particularly in
the realms of information collection and analysis.

(f) Cluster 6: Multi-Agent Planning

Size: 5

Keywords: multi-agent planning, plan auxiliary generation,
military planning system, planning techniques, task
decomposition

Analysis: The "Multi-Agent Planning" cluster concentrates on
military planning systems and techniques, particularly

in the context of task decomposition and auxiliary generation. Research in this domain is vital for understanding and developing more efficacious strategies and technologies for joint operations.

(g) Cluster 7: Magnetic Levitation

Size: 5

Keywords: magnetic levitation, electric load leveling, high-temperature superconductivity, uninterruptible power supply, flywheel energy storage system

Analysis: This cluster explores magnetic levitation technology and its applications in modern warfare, including energy storage and uninterruptible power supply systems. These technologies offer more efficient and reliable energy solutions, vital for ensuring operational efficiency and reliability.

(h) Cluster 8: Battlefield Damage Assessment

Size: 5

Keywords: battlefield damage assessment, vehicle equipment, battle damage, damage level, equipment

Analysis: The "Battlefield Damage Assessment" cluster focuses on understanding and assessing the level and impact of

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

damages on the battlefield. It involves detailed evaluations of battle damages to determine necessary responses and recuperative measures, crucial for ensuring success in operations.

Through the analysis of each cluster, we delineate various facets and the current state of research in joint operations. Each cluster offers a unique lens to comprehend and assess different dimensions of joint operations, providing a comprehensive perspective on the current status and future trajectories in joint operations research. This analysis affirms the multifaceted and depth-induced nature of joint operations, showcasing a field rich with complexity and layers warranting extensive research.

B. Keyword Co-occurrence Frequency:

Utilizing the CiteSpace software to extract the top 10 highest keyword co-occurrence frequencies, we find that the more frequently occurring keywords include "Joint Operation and Joint Operations," "complex network," "effectiveness evaluation," "command and control," and "command information system," among others (as shown in Table 1). From

the keyword co-occurrence frequency, we can observe the following:

(a) Evolution of Defense Technology:

Keywords such as “Complex Network,” “Effectiveness Evaluation,” “Command and Control,” and “Command Information System” highlight the technical directions of the PLA’s joint operations research, particularly advancing in information technology and network systems. Earlier research may have centered more on theoretical frameworks and the design of command and control systems. Over time, there has been an increasing focus on the “Complex Network,” indicating a shift in research towards the complexity and diversity of military networks, emphasizing the importance of information technology in modern warfare. This indicates a transition from basic tactics to higher-level strategies and complex network systems.

(b) Influence of the U.S. Government and Military:

“Biden Administration” (first appeared in 2021); “US Armed Forces” (first appeared in 2022). This demonstrates that in recent years, researchers in the PRC have particularly

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

increased their interest in U.S. policies and military forces pertaining to the development of joint operations.

(c) Technological Innovation and Human-Machine Interaction:

“Contribution Rate Evaluation,” “Human-Computer Interaction”—these recent keyword terms highlight the recent focus on technological innovation and human-machine interaction. This suggests that the focal point of joint operations research is shifting towards more technology-driven approaches, especially in terms of human-machine interaction.

Table 1: Co-occurrence Frequency of Keywords in The PRC’s Joint Operations Related Articles (Top 10)

Rank	Keyword	Number of Occurrences	Year of First Appearance
1	Joint Operation	7	2011
2	Complex Network	7	2014
3	Effectiveness Evaluation	6	2010
4	Command and Control	5	2011
5	Command Information System	4	2016
6	Joint Operations	3	2005
7	Biden Administration	3	2021
8	Contribution Rate Evaluation	2	2019
9	Human-Computer Interaction	2	2020

10	U.S. Armed Forces	2	2022
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Data Source: Compiled by this study.

(2) "Author" Metric Analysis
A. the Highest Citation Frequencies

Employing a rigorous metric analysis, with authors as pivotal nodes within the extensive CNKI database literature, we initiate an exploration into the complex network of relationships among key authors in the joint operations field. This method, intersecting bibliometric analysis and network theory, enables an in-depth examination of the collaborative dynamics shaping scholarly discussions in this area.

The author co-occurrence analysis diagram visually represents each author as a node. Here, node size, correlating with the author's publication count, signifies their extensive influence in this academic field.

The connections between nodes, varying in thickness, represent the strength of collaboration among authors, with thicker links indicating more substantial collaborative histories, thus illustrating a network of tightly-knit academic alliances. Our analysis begins with a focus on citation frequency and emerging collaborative networks (as depicted in Figure 3).

Utilizing Big Data Methodologies to Analyze the Current Status and Trends of Joint Operations Research in the PRC

Leading this network is Jichao LI, credited with three significant contributions to the field, detailed in Table 2. Following him are authors with one or two notable works. However, in the context of 345 valid papers reviewed, their contributions, while valuable, seem relatively modest, suggesting a field ripe for further research and academic contribution.

Regarding the authors' research backgrounds, most highly cited authors are affiliated with PLA institutions, as shown in Table 2. For instance, Jichao Li, Peng Liu, Danling Zhao, Kewei Yang, and Chen Chao are associated with the National University of Defense Technology. Liu Zhaopeng is part of Unit 63623 of PLA, based in Jiuquan, Gansu Province, likely under the Strategic Support Force's Jiuquan Base.

Other authors, such as Zhou Jiajun of Anqing Normal University, Zhao Yinan of the School of Optoelectronic Engineering at Xi'an University of Technology, and Jin Xin of Zhejiang University, have less apparent connections to the PLA. Their contributions may primarily involve transferring research findings and technologies to the PLA through military-civil fusion.

Their primary focus is on “optimizing joint combat systems and weapon effectiveness” in joint operations. In the realm of academic research on optimizing joint combat systems and weaponry effectiveness, the National University of Defense Technology is of utmost significance. All principal authors are linked to this institution, underscoring its pivotal role in advancing knowledge in this domain. These authors are also the most frequently cited in this field, reflecting the substantial impact of their collective research. However, the affiliations of other authors in this field are not as prominent. While the affiliations of Jichao Li, Peng Liu, Danling Zhao, and Kewei Yang are central to the discussion, others have less noticeable connections.

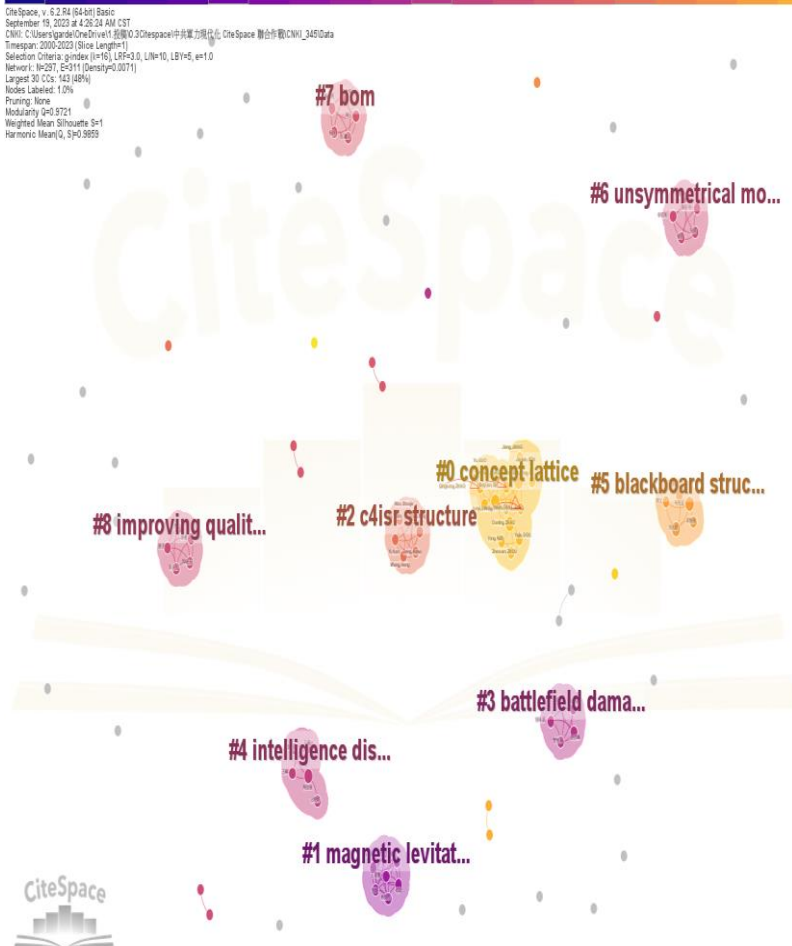
Moreover, a detailed analysis reveals the early development stages of an expanding network within the CCP’s joint operations research, marked by emerging clusters like the "Concept Lattice". This emerging cluster, led by Jichao LI and supported by ten other scholars, including Boyuan Xia, Kewei Yang, and Yuejin Tan, signifies a convergence of the top four highly cited authors, reflecting a shared research direction with

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

overlapping interests and collaborations in specific sub-domains of joint operations.

This scenario creates a scholarly ecosystem where interconnected and complementary perspectives merge, potentially impacting policy decisions in joint operations research. However, these relationship networks are still evolving, dispersed, and yet to form a cohesive research community.

This situation reflects the current state and serves as an impetus to further develop this academic field, encouraging deeper collaborations and the growth of comprehensive research academies that could become centers of innovative thinking and academic excellence in the future.



**Figure 3: Top 9 Clusters in the Collaborative Network of Authors in
The PRC's Joint Operations Research**

Data Source: Produced by this study using CiteSpace software and drawing upon data from CNKI.

Table 2: Top 9 Authors in Joint Operations Research with the Highest Citation Frequencies

Citation Counts	Author Name	Institution	Year of Cited Paper	Cluster ID
3	Jichao LI ¹²	College of Systems Engineering, National University of Defense Technology	2020	0
2	Peng LIU ¹³		2020	0
2	Danling ZHAO ¹⁴		2019	0
2	Kewei YANG ¹⁵		2020	0
2	Zhou Jiajun (周佳駿) ¹⁶	Anqing Normal University	2011	4
2	Liu Zhaopeng (劉兆鵬) ¹⁷	Unit 63623 of PLA	2018	5

¹² SUN Jianbin, LI Jichao, YOU Yaqian, JIANG Jiang and Ge Bingfeng, "Combat network link prediction based on embedding learning," *Journal of Systems Engineering and Electronics*, Vol. 33, No. 2, 2022, pp. 345-353.

¹³ Peng Liu, Boyuan Xia, Zhiwei Yang, Jichao Li and Yuejin Tan, "A deep reinforcement learning method for multi-stage equipment development planning in uncertain environments," *Journal of Systems Engineering and Electronics*, Vol. 33, No. 6, 2022, pp. 1159-1175.

¹⁴ LIU Peng, LI Jichao, XIA Boyuan, ZHAO Danling and TAN Yuejin, "Weapons equipment portfolios selection based on equipment system contribution rates," *Journal of Systems Engineering and Electronics*, 2021, Vol. 32, No.03, pp. 584-595.

¹⁵ JIANG Jiuyao, LI Jichao and YANG Kewei, "Weapon system portfolio selection based on structural robustness," *Journal of Systems Engineering and Electronics*, 2020, Vol. 31, No.06, pp.1216-1229.

¹⁶ 周佳駿、王峰、汪婷婷、李尚堅，〈網路對抗下的情報推送自我調整尋徑模型〉，《電腦工程與應用》，2010年，第46卷第19期，頁120-124。

¹⁷ Mingshan Wei, Mingming Zhu, Guanghua Liu and Zhaopeng Liu, "A Target Identification Method for Feature Point and Curve Similarity," *Radar Science and Technology*, No.6, 2022, pp. 688-696+704.

2	Chen Chao (陳超) ¹⁸	Science and Technology on Information Systems Engineering Laboratory, National University of Defense Technology	2020	22
2	Zhao Yinan (趙軼男) ¹⁹	School of Optoelectronic Engineering, Xi'an University of Technology	2020	22
2	Jin Xin (金鑫) ²⁰	Zhejiang University	2005	25

Data Source: Developed in this study using CiteSpace software, based on data imported from CNKI.

¹⁸ Chao Chen, Zhengjun Du, Xingxing Liang, Jianmai Shi and Hao Zhang, “Modeling and solution based on stochastic games for development of COA under uncertainty,” *Journal of Systems Engineering and Electronics*, Vol. 30, No. 2, 2019, pp.288-296

¹⁹ 趙軼男、蔡榮立，〈溫槍彈道中光電靶靈敏度控制系統優化設計〉，《計算機測量與控制》，2018 年，第 26 卷第 04 期，頁 120-123。

²⁰ 劉旭、孫培、廬山、蘇宏業、金鑫，〈基於單目事件相機的無人機位姿回溯映射估計方法〉，《2022 中國自動化大會論文集》，2022 年 11 月 25 日(中國福建廈門)，頁 552-557。

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

Note: The names in parentheses are the original names of the authors, translated into English for this study.

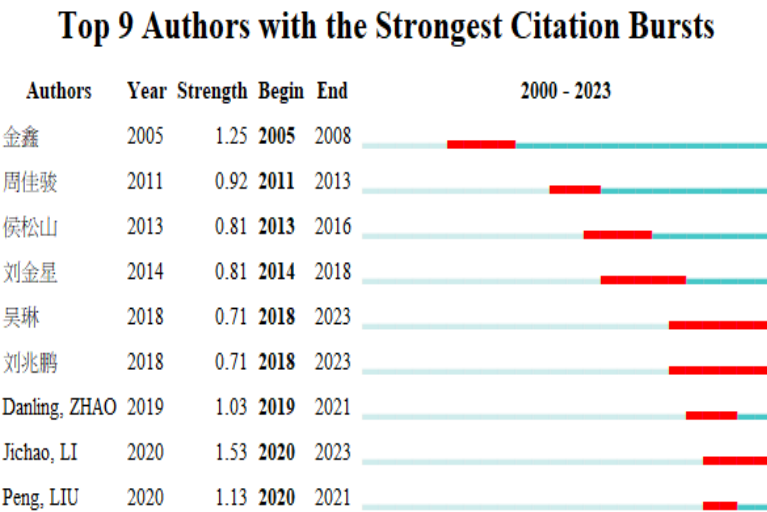


Figure 4: Emergence of Highly Cited Authors in Joint Operations Research in The PRC as per CNKI

Data Source: This research utilized the CiteSpace software to generate diagrams based on data imported from the CNKI database.

B. Author Emergence Analysis

using co-occurrence analysis with authors as nodes, we can clearly reveal the current research status and trend changes in the PRC in the field of joint operations from 2000 to 2022. The emergence of highly cited authors has undergone the following changes (see Figure 4):

(A) Early stage (2009-2013) :

Dominated by Jin Xin (金鑫) and Zhou Jiajun (周佳駿), the research topics were mainly “U.S. military joint logistics support system, the effect of satellite information support on operational effectiveness assessment, Adobot case analysis based on computer network confrontation,²¹ mobile information publish/subscribe model under P2P network” among others, focusing mainly on technological development. However, these research topics were not continued.

(B) Mid-term (2013-2018):

Led by Hou Songshan and Liu Jinxing, they published works on “foreign language teaching and military English, cyber space tactical maneuver element analysis, battlefield situation based on U.S. military interactive operational warfare map family”. The research trend declined around 2018.

(C) Recent (2018 to present):

Emerging authors include Wu Lin, Liu Zhaopeng (劉兆鵬), Danling ZHAO, Jichao LI, Peng LIU, etc. The research topics are “combat mission modeling, improved behavior tree combat

²¹ "Adobot" referring to a notorious computer worm/malware that propagated through networks by exploiting vulnerabilities in the early 2000s. This may have been a typo in the original text. The analysis of the Adobot case would be relevant to research on computer network confrontation and cyber warfare capabilities in the context of joint operations.

planning modeling methods, joint operations deduction analysis modeling” and so forth. The results show that in recent years, the topics of joint operations research in the PRC have clearly been closer to actual combat effectiveness and applicability.

V. Conclusion

This study, encompassing a comprehensive period from 2000 to 2022, has illuminated the evolving landscape of joint operations research in The PRC through the lens of big data methodologies. The initial findings underscore a predominant focus on macro-level international and regional security concerns, somewhat overshadowing the finer aspects of tactical methods and technological advancements. This observation is crucial as it hints at a potential gap in current research, emphasizing the need for a more granular exploration of tactical methodologies alongside macroscopic strategies.

The emerging shift towards integrating real-world applications and practical combat scenarios marks a significant departure from the earlier technical-centric approach. This evolution in research perspective not only diversifies the field but also roots it in pragmatic realities, blending theoretical

insights with applied research. Such a trend is indicative of a maturing research domain, albeit still in its nascent stages, with various independent research trajectories yet to converge into a consolidated scholarly community.

However, this study acknowledges certain limitations in its approach, with a spectrum of perspectives remaining unexplored. Future research endeavors, enriched by expert interviews and case studies, are envisaged to deepen the understanding and validate the findings derived from big data analysis. This is essential to build a comprehensive knowledge base that encompasses both macroscopic and microscopic viewpoints.

As this study paves the way for future research, it stands as a guiding light in the exploration of The PRC's joint operations. It lays a foundational framework for in-depth, diversified research, aiming to critically assess and understand the strategic blueprint that shapes The PRC's trajectory in joint operations. This pursuit is not merely academic but pivotal in informing Indo-Pacific regional security policies, steering towards a pathway of enlightened and informed decision-making in an ever-evolving geopolitical landscape.

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

Thus, this study contributes significantly to the understanding of The PRC's military strategies and joint operations, serving as a cornerstone for future scholarly inquiries and strategic policy formulation in the realm of international security and defense studies.

運用大數據方法分析中國大陸聯合作戰研究現狀及趨勢

劉至祥

(國防大學中共軍事事務研究所助理教授)

Abstract

聯合作戰作為未來戰爭發展的重要方向，其研究規模與深度值得關注。本研究使用大數據方法針對 China National Knowledge Infrastructure (CNKI) 資料庫收錄 2000-2022 年的聯合作戰研究期刊論文進行 Latent Dirichlet Allocation (LDA) 主題分析，接續運用 CiteSpace 進行文獻計量探討。研究發現首先從主題建模分析來看，目前中國大陸聯合作戰研究現狀較集中在宏觀層面的國際和區域安全問題上，而對於具體的戰術方法和技術的研究相對較少。其次，文獻計量分析來看，近年聯合作戰研究趨勢正從技術層面逐漸擴展到實戰應用，部分作者間被引用關係網絡已逐步形成，尚未形成研究學群。本研究僅能對當前發展趨勢有初步理解，建議未來加入更多研究視角，結合專家訪談以及案例分析，以檢驗大數據分析結果。

Utilizing Big Data Methodologies to Analyze the Current Status and Trends
of Joint Operations Research in the PRC

Keywords: Joint Operations, LDA, Bibliometrics, CiteSpace
Research Hot Spots, Research Trends

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific

Christopher H. Sharman¹

(Executive Director of the China Maritime Studies Institute,
United States Naval War College)

Abstract

China's near seas defense and far seas protection naval strategy serves as a strategic framework for a national maritime strategy that helps to guide efforts of both military and nonmilitary maritime forces toward advancing China's strategic objectives related to Taiwan. This paper analyzes strategic PLA guidance as well as China's maritime operations to identify the priorities driving the strategy's ends, ways, and means. This examination reveals flawed strategic assumptions that underpin the strategy and synchronization challenges across several supporting lines of effort. These shortcomings undermine its

¹ CAPT (Retired), United States Navy serves as the Executive Director of the China Maritime Studies Institute at the United States Naval War College. He holds a M.S. Strategic Studies National Defense University, 686 Cushing Road Newport, RI 02841-1207 Telephone Contact: 703.944.8046. E-mail: Chris.h.sharman@gmail.com

efficacy contributing to counterproductive results including an increased external military presence in the region and greater regional instability, which are likely to complicate China's ability to achieve the desired end state of its near seas defense and far seas protection strategy.

Keywords: Maritime, Strategy, Navy, Defense, Military (海洋, 战略, 海军, 国防, 军事)

Acts of PRC maritime coercion are rarely documented as well as they were by the Philippine Coast Guard (PCG) on the morning of 5 August 2023. That morning, PCG ships escorted two contracted commercial vessels to deliver food, water, fuel and other supplies for Filipino military personnel stationed aboard the Philippine Navy's dilapidated tank landing ship BRP Sierra Madre grounded at Second Thomas Shoal.

While transiting toward their destination, PCG personnel observed People's Liberation Army Navy (PLAN) combatants operating in the distance, presumably monitoring the Philippine resupply efforts. Approaching their destination, the Philippine vessels were met by a total of six China Coast Guard (CCG) vessels and two maritime militia vessels that maneuvered aggressively to halt the resupply mission.² Several of the CCG ships fired their water cannons. This was the first time since November 2021 that the Chinese Coast Guard employed water cannons against Philippine vessels executing a resupply mission to Second Thomas Shoal.³ The apparent coordination between

² Dzirhan Mahadzir, "Video: Blast Philippine Military Resupply with Water Cannons" *USNI News Online*, August 7, 2023. Available at: <https://news.usni.org/2023/08/07/video-china-coast-guard-blast-philippine-military-resupply-with-water-cannons>

³ "Philippines accuses China of water cannon attack in Spratly Islands" *The Guardian Online*, August 6, 2023. Available at

three arms of China's PLA-subordinate maritime forces suggests the PRC response was planned and coordinated to advance China's strategic interests.⁴

One day prior to the water cannon incident, Taiwan's Ministry of National Defense (MND) reported 11 PLAN vessels operating in the vicinity of Taiwan with four PLA aircraft crossing the Taiwan Strait centerline.⁵ These vessels were likely a combination of PLAN destroyers and frigates armed with long range surface to air and surface to surface missiles capable of targeting Taiwan's military ships or aircraft operating in the area.

That same day, China's Navy hospital ship, the *Peace Ark* concluded its seven-day humanitarian port visit to the Pacific Island nation of Tonga. This port call was part of a multi-month

<https://www.theguardian.com/world/2023/aug/06/philippines-accuses-china-of-water-cannon-attack-in-spratly-islands>

⁴ The CCG is part of the People's Armed Police, which is subordinate to China's Central Military Commission. During international sea incidents or provocations, the People's Armed Forces Maritime Militia (PAFMM) operate under the PLA chain of command. See: Conor M. Kennedy, and Andrew S. Erickson., "China Maritime Report No. 1: China's Third Sea Force, The People's Armed Forces Maritime Militia: Tethered to the PLA" (2017). *CMSI China Maritime Reports*. 1. <https://digital-commons.usnwc.edu/cmsi-maritime-reports/1>

⁵ "PLA activities in the waters and airspace around Taiwan Aug.4, 2023" *Ministry of National Defense Republic of China*, Available at: <https://www.mnd.gov.tw/english/Publish.aspx?title=News%20Channel&selectStyle=Military%20News%20Update%20&p=81792>, August 4, 2023.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific
“Harmonious Mission” deployment that includes stops in
Kiribati, the Solomon Islands, Vanuatu, and Timor Leste.⁶

While each of these three events may appear to be independent from one another, each represents an individual line of effort within China's maritime strategy.⁷ The term “maritime strategy” (海洋战略), however, rarely appears in Chinese documents. PLA strategists traditionally refer to “naval strategy” (海军战略), which involves only naval forces, or to “maritime security strategy” (海上安全战略), which leverages other components of sea power to include the People's Liberation Army Navy (PLAN), maritime law enforcement, and the People's Armed Forces Maritime Militia (PAFMM).⁸ It is unlikely, however, the PRC has published a single national maritime strategy to guides the development and operations of all its maritime resources.

⁶ Yew Lun Tian, “Chinese military-run hospital ship arrives in Kiribati”, *Reuters*, July 16, 2023. Available at <https://www.reuters.com/world/asia-pacific/chinese-military-run-hospital-ship-arrives-kiribati-2023-07-16/>

⁷ Maritime strategy can be defined as state policy governing the use of sea power to achieve national objectives in peacetime. See Geoffrey Till, *Seapower: A Guide for the Twenty-First Century*, 2nd ed. (New York: Routledge, 2009), p. 21.

⁸ Ryan D. Martinson, "Panning for Gold: Assessing Chinese Maritime Strategy from Primary Sources," *Naval War College Review*: Vol. 69, No. 3 (2016), p. 2, Available at: <http://digital-commons.usnwc.edu/nwc-review/vol69/iss3/4>.

This paper asserts, however, the contours of a national maritime strategy are inherent within China's near seas defense and far seas protection strategy. The strategic principles and military objectives that drive this strategy are also relevant to nonmilitary maritime resources, giving the PRC a framework for a national maritime strategy. Yet China's difficulty synchronizing the efforts of its maritime resources and flawed strategic assumptions appear to hamper China's ability to achieve the strategy's desired end state.

The paper consists of three sections. This first section briefly traces the evolution of "near seas defense and far seas protection" (近海防禦、远海防卫), the PLA's current naval strategy, to demonstrate how it may be applicable to Ministry of National Defense (MND) forces and nonmilitary maritime assets. It then conducts an analysis of PRC strategic maritime guidance and operations to identify the objectives and ways PRC maritime forces execute this strategy through various lines of effort. These lines of effort help to highlight several synchronization challenges that appear to hamper the strategy's efficacy. The paper concludes by discussing the implications for U.S. and Taiwan security interests.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific

The Evolution of China's Naval Strategy

The People's Republic of China (PRC)'s first naval strategy from its founding in 1949 to the mid 1980s is commonly referred to as a “near coast defense strategy” (近岸防御). This strategy referred to the defense of approximately twelve nautical miles that extend seaward from China's coastline. In the 1950s to early 1960s, this coastal strategy was oriented around defending against a small-scale incursion by the Taiwan-based Kuomintang (KMT) forces and in the 1960s, it shifted its focus to protecting China's maritime flanks from a potential Soviet amphibious invasion that could come anywhere along China's long coastline.

By early 1980s, the PLA adopted a new naval strategy of near-seas active defense (近海积极防御).⁹ This strategy covers a much larger sea area to include the first island-chain, the Yellow Sea, East China Sea, and South China Sea as well as the sea areas adjacent to the outer rims of the first island chain.¹⁰ This strategy altered the strategic direction (the direction the

⁹ Nan Li (2009) The Evolution of China's Naval Strategy and Capabilities: From “Near Coast” and “Near Seas” to “Far Seas”, *Asian Security*, 5:2, pp. 146-150, DOI: 10.1080/14799850902886567,

¹⁰ See Liu Huaqing, *Liu Huaqing huiyilu* (Liu Huaqing's Memoirs) (Beijing: Liberation Army Press, 2004), p. 437.

PLA must prepare for combat) from the Soviet Union to reunification with Taiwan.¹¹ This strategic change required the PLAN advance naval capabilities that enable operations further from the coast to support this objective. Consequentially in the mid 1990s, the PLAN began to modernize its navy forces and to develop platforms that were more capable of operating at greater distances away from the coast.

Starting in the late 1990s, China's leadership began discussing the concept of "far seas operations."¹² In terms of operational scope, this would extend the areas the PLAN was expected to operate to include waters beyond the near seas to the waters between the first and second island chain as well as waters beyond the second island chain to include the northwest Pacific to the east and the Indian Ocean to the west.¹³

In 2004, the PLAN began to methodically expand its operational range beyond the first island chain with regular

¹¹ Joel Wuthnow and M. Taylor Fravel, "China's Military Strategy for a 'New Era': Some Change, More Continuity, and Tantalizing Hints." *Journal of Strategic Studies*, Mar. 2022, p. 6, <https://doi.org/10.1080/01402390.2022.2043850>.

¹² See Ye Xinrong and Zuo Liping, "Strategic Reflections Regarding the March of the Navy from the Near Seas to the Far Seas," *Military Art Journal* No. 10 (2004), pp. 30–33 in Li, "Evolution of China's Naval Strategy and Capabilities: From "Near Coast" and "Near Seas" to "Far Seas"" p. 160.

¹³ *Ibid.*, 160.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific deployments of that gradually increased in complexity into the western Pacific demonstrating the PLAN was moving toward a new strategy.¹⁴ In addition, the PLAN began deployments to the Indian Ocean to support of counter-Piracy operations starting in late 2008. These far seas deployments were indicative of an evolving naval strategy that incorporated developing both the near and far seas capabilities.

China's third navy strategy of near seas defense and far seas protection was finally announced with the publication of China's 2015 Defense White Paper, which stated:

In line with the strategic requirement of offshore waters defense and open seas protection, the People's Liberation Army Navy (PLAN) will gradually shift its focus from 'offshore waters defense' to a combination of 'offshore waters defense' (近海防御) with 'open seas protection,' (远海护卫): and build a combined, multi-functional and efficient combat force structure.

15

¹⁴ See Christopher H. Sharman "China Moves Out: Stepping Stones to a New Maritime Strategy", China Strategic Perspectives 9 (Washington, DC: National Defense University, April 2015).

¹⁵ "China's Military Strategy", *Xinhua*, May 26, 2015, Available at: http://www.china.org.cn/china/2015-05/26/content_35661433.htm. Note: Offshore waters defense and near seas defense are interchangeable translations of 近海防御, which is used in the 2015 Defense White Paper.

Both near seas defense and far seas protection are critical components of this strategy. Near seas defense must address the is numerous disputed territories lie within the “near seas” such as the Spratly, Paracel, and Senkaku Islands. Adding “far seas protection” to the strategy greatly expands China’s maritime responsibilities. While far seas missions may primarily be the responsibility of longer-range PLAN ships, other maritime assets are not precluded from supporting the far seas “protection” requirements.

While China may not have published single overarching national maritime strategy, it is noteworthy that the State Council publishes the Defense White Paper. The State Council is the supreme organization of state administration. Its responsibilities include adopting administrative regulations in accordance with China’s laws, directing and administering civil affairs and public security, and directing and administering the building of national defense.¹⁶ These authorities empower the

Similarly, 远海护卫 can be translated far seas protection or open seas protection. This paper will use near seas defense and far seas protection as the translation.

¹⁶ “State Structure of the Republic of China” *National People’s Congress of the PRC*. Available at: http://www.npc.gov.cn/zgrdw/englishnpc/stateStructure/2007-12/06/content_1382098.htm

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific State Council to assign near seas defense and far seas protection responsibilities to the armed forces. In addition, the State Council could exert its administrative authorities to direct the efforts of non-military maritime forces to support the near seas defense far seas protection strategy, which would enable the PRC to establish a national maritime strategy by harnessing non-military assets such as scientific research vessels, other government Ministry's ships, and state-owned enterprises to support PRC strategic military objectives. These assets all fall outside the administrative control of the Ministry of National Defense, but the personnel charged with managing these non-military resources likely would be familiar with State Council guidance and regulations because of its potential applicability to the assets they oversee.

Non-military forces may at times be subjected to the requirement to support PLAN objectives in its near seas defense far seas protection strategy. After all, PRC commercial transportation vessels such as roll-on roll-off ships and fishing vessels frequently are contracted to support military exercises.¹⁷

¹⁷ See Michael J. Dahm, "China Maritime Report No. 25: More Chinese Ferry Tales: China's Use of Civilian Shipping in Military Activities, 2021-2022" (2023). *CMSI China Maritime Reports*. 25. Available at: <https://digital-commons.usnwc.edu/cmsi-maritime-reports/25>

Moreover, the traditional people's war concept would suggest that war is a society-wide effort, not just the responsibility of the military. While State Council's directives related to non-military maritime support to China's naval strategy are often opaque, principles to guide the efforts of China's maritime forces likely exist. These guiding principles would form the backbone of a national maritime strategy and appear to be embedded within China's near seas defense and far seas protection strategy.

A Strategic Framework for a National Maritime Strategy

A national maritime strategy – like any strategy, – would consist of a combination of ends, ways, and means. Ends are the outcomes sought, to include defining the overarching political aim. The means are the resources and capabilities available, and the ways are how means are used to achieve the desired end state.¹⁸ A comprehensive strategy entails the orchestration of

¹⁸ Steven Heffington, Adam Oler and David Tretler, “*A National Security Strategy Primer*” (Washington D.C: National Defense University Press, 2019), pp. 1-2. Available at: https://nwc.ndu.edu/Portals/71/Documents/Publications/NWC-Primer-FINAL_for%20Web.pdf?ver=HOH30gam-KOdUOM2RFoHRA%3D%3D

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific the instruments of national power in time and space to achieve the desired end state.¹⁹

Contours of a national maritime strategy becomes evident through an examination of the ends, ways, and means of China's near seas defense and far seas protection strategy. Authoritative PRC guidance and documented maritime activity helps to identify the strategic priorities for China's maritime forces and the lines of effort the PLA uses support the strategy's execution.

Strategic Ends

The near seas defense and far seas protection strategy must support China's national defense strategy to ensure it is synchronized with higher level strategic objectives. To identify the "ends" of China's maritime strategy, therefore, one must first consider the goals and objectives of China's active defense military strategy. The "ends" of China's military strategy are specified in China's national Military Strategic Guidelines and are reflected in China's Defense White Papers.

The Military Strategic Guidelines are the highest level of national guidance and direction to the armed forces and issued

¹⁹ Ibid., p 1.

under the authority of the Central Military Commission. They provide the PLA with the strategic direction (the orientation of the primary threat to the PLA).²⁰ Unfortunately, the guidelines are not available to western audiences, which requires readers to discern their content from reflections of their content in PLA journals or books. Strategic ends proscribed within the Military Strategic Guidelines traditionally include defending national territory and sovereignty, securing the nation's maritime rights and interests, maintaining unity of the motherland, ensuring internal stability, and maintaining a secure and stable external environment.²¹ Each represents a vital national interest, and the military must support each of these strategic end states.

Defense White Papers are widely available and appear to be consistent with the Military Strategic Guidelines making them a useful tool to identify the “ends” of China's military strategy. The publicly facing White Papers identify several principles the military must uphold, which are similar to the traditional end states contained in the guidelines. These

²⁰ See David Finkelstein, “China's National Military Strategy: An Overview of the ‘Military Strategic Guidelines’” in Andrew Scobell, *Right Sizing the People's Liberation Army: Exploring the Contours of China's Military*, p. 85, <https://press.armywarcollege.edu/monographs/72>.

²¹ Ibid. p. 109.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific principles include, deterring and winning wars, fostering a posture favorable to China's peaceful development, striking a balance between rights protection and stability, plan for military struggle, and employing both strategy and tactics featuring flexibility and mobility.²²

The White Paper's direction to uphold the principle of deterring and winning wars and planning for military struggle is consistent with the guideline's goal of defending national territory and sovereignty and maintaining unity of the motherland. Striking a balance between rights protection and stability, aligns with securing the nations maritime rights and interests. Maintaining peaceful development parallels the guideline's objective to ensure internal stability. Rights protection is similar to maintaining unity of the motherland. The consistency between the principles identified publicly in the White Paper and the objectives traditionally contained in the guidelines suggests the principles published in the white papers represent the desired "ends" of China's active defense military strategy.

²² "China's Military Strategy", *Xinhua*, May 26, 2015, Available at: http://www.china.org.cn/china/2015-05/26/content_35661433.htm.

Strategic Ways & Means

The 2019 Defense White Paper identifies nine tasks listed in Table 1 that the military must be capable of accomplishing in order to achieve the end states proscribed by the Strategic Guidelines and its reflections in the White Paper. These nine tasks are the “ways” of China’s military strategy. Successfully executing these “ways” would enable the military to achieve the military strategy’s desired end state. For example, the military must contain Taiwan independence and safeguard China’s maritime rights in order to support the strategic objective of defending national territory and sovereignty. The nine “ways” listed in the White Paper are:

Table 1: Strategic “Ways”²³

To deter and resist aggression
To safeguard national political security, the people’s security and social stability
To oppose and contain “Taiwan independence”
To crack down on proponents of separatist movements such as “Tibet independence” and the creation of “East Turkistan”
To safeguard national sovereignty, unity, territorial integrity, and security
To safeguard China’s maritime rights and interests
To safeguard China’s overseas interests
To support the sustainable development of the country

²³ “China’s National Defense in the New Era”, *Xinhua*, July 24, 2019, Available at: https://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html

These requirements provide the initial contours of what is expected from PRC maritime forces to support the active defense strategy. While the PLAN would play a role in many of the requirements, it would have a significant or lead role supporting the six shaded requirements in Table 1. These likely serve as the objectives for the near seas defense and far seas protection strategy.

Strategic documents suggest, however, that some of these “ways” are more important than others. In particular, maritime-related tasks from this list appear to take primacy. The 2014 Strategic Guidelines placed emphasis on the maritime domain, which was the first time a domain was singled out in a guideline at the strategic level.²⁴ This same emphasis is echoed in the 2015 Defense White Paper, which states, “the traditional mentality that the land outweighs the sea must be abandoned and great importance has to be attached to managing the seas and oceans and protecting maritime rights and interests.”²⁵ The maritime

²⁴ Joel Wuthnow and M. Taylor Fravel, “China’s Military Strategy for a ‘New Era’: Some Change, More Continuity, and Tantalizing Hints,” pp. 6, 8.

²⁵ “China’s Military Strategy”, *Xinhua*, May 26, 2015, Available at:

domain may be singled out for emphasis because of the numerous territorial disputes within the maritime domain that could threaten PRC-claimed sovereignty.

It may be possible to further distil PRC prioritization. The Military Strategic Guidelines and Defense White Papers suggests that opposing and containing Taiwan independence serves as the most important of the “ways” of China’s strategic requirements to achieve the strategic ends of preserving territorial integrity. The 2019 Defense White Paper states, “The “Taiwan independence” separatist forces and their actions remain the gravest immediate threat to peace and stability in the Taiwan Strait and the biggest barrier hindering the peaceful reunification of the country” and that “China must be and will be reunited. China has the firm resolve and the ability to safeguard national sovereignty and territorial integrity and will never allow the secession of any part of its territory by anyone, any organization, or any political party at any time.” It continues by stating, “The PLA will resolutely defeat anyone attempting to separate Taiwan from China and safeguard national unity at all costs.”²⁶ These statements are emphatic, unambiguous, and

http://www.china.org.cn/china/2015-05/26/content_35661433.htm.

²⁶ “China’s National Defense in the New Era”, *Xinhua*, July 24, 2019.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific underscore the primacy of the Taiwan issue. While other maritime and territorial issues are addressed, the 2019 White Paper reserves the most bellicose and unequivocal language for Taiwan.

The 2014 Military Strategic Guidelines also emphasized Taiwan-related requirements by expanding the strategic direction to include parts of the western Pacific that would be relevant for a Taiwan contingency.²⁷ The inclusion of the maritime approaches to Taiwan as part of PLA's strategic direction suggest the PLA must not only focus its efforts on different courses of action against Taiwan itself, but also develop the capabilities necessary to defend the sea lanes of communication (SLOCs) that lead to the potential battlespace around Taiwan. This expands the functional and geographic responsibilities of China's maritime forces.

The "means" of China's near seas defense and far seas protection strategy are China's military maritime resources which includes the Coast Guard, the PAFMM, the PLAN, and

Available at:
https://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html

²⁷ Wang Hongguang, "Looking at China's Strategic Directions Today from a Historical Perspective", *Tonghou Gongyin*, No. 3 (March 2015), p. 48 in Wuthnow & Fravel, "China's military strategy".

any other military-subordinate maritime resources. These “means” must simultaneously execute multiple lines of effort to support China’s military strategy. These lines of effort must be orchestrated in time and space to effectively advance China’s strategic Taiwan objectives. SLOC protection, enhancing combat proficiencies around Taiwan, and advancing PRC strategic interests in the Pacific Islands appear to be three of the lines of effort within this strategy. These three lines of effort, however, also demonstrate flawed PRC assumptions and synchronization challenges that hampers the strategy’s efficacy.

Line of Effort: SLOC Protection

Defending strategic SLOCs leading to Taiwan is critical to the success of any military-related Taiwan objective because control of these SLOCs impacts the ability of military forces to access the battlespace around Taiwan. These SLOCs include major shipping channels leading to Taiwan through the South and East China Seas and the Western Pacific.

One way China protects its SLOCs is through rights protection and law enforcement missions. According to the most recent Defense White Paper, since 2012, China has conducted over 4,600 maritime security patrols and conducted

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific

72,000 rights protection and law enforcement operations in the East and South China Seas.²⁸ Rights protection and law enforcement operations serve many purposes. They not only help to assert China's sovereignty over disputed islands and features and the waters surrounding them, they also provide China's maritime forces with real-world operational experience in the SLOCs they would operate during any potential Taiwan conflict. Rights protection and law enforcement missions, however, appear to undermine China's strategic objectives related to Taiwan.

CCG and PLAN operations near the Senkaku Islands are one example. The Senkaku islands are located in the East China Sea less than 200 nautical miles northeast of Taiwan. Operational control the SLOCs in the vicinity of the Senkaku Islands would be necessary to support any cross-Strait conflict because of their close proximity to Taiwan. The CCG have continuously patrolled within Japan's contiguous zone near the Senkaku Islands and have periodically entered Japan's claimed territorial waters since Japan nationalized three of the Senkaku

²⁸ "China's National Defense in the New Era", *Xinhua*, July 24, 2019, Available at: https://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html

Islands in September 2012.²⁹ During the month of August 2023 alone, over one hundred PRC vessels operated in the contiguous zone around the islands with eight vessels entering the islands territorial waters.³⁰ PLAN combatants also routinely operate nearby the islands.³¹ In June 2016, a PLAN frigate entered the contiguous zone, in January 2018 a PLAN submarine submerged and entered the contiguous zone, and PLAN intelligence collection ships have operated in the island's vicinity multiple times.³²

Chinese incursions into waters around the Senkaku Island and the persistent PLAN presence nearby increases the likelihood of a potential accident or an incident between China and Japan. Such an incident could also prompt U.S. intervention. U.S. policy states that the 1960 U.S.-Japan security treaty covers these islands, which may obligate the United States to come to

²⁹ “Trends in China Coast Guard and Other Vessels in the Waters Surrounding the Senkaku Islands, and Japan's Response”, *Ministry of Foreign Affairs of Japan*. Available at: https://www.mofa.go.jp/region/page23e_000021.html

³⁰ “Trends in China Coast Guard and Other Vessels in the Waters Surrounding the Senkaku Islands, and Japan's Response”, *Ministry of Foreign Affairs of Japan*. Available at: <https://www.mofa.go.jp/files/100547529.pdf>

³¹ “China's Activities in East China Sea, Pacific Ocean, and Sea of Japan”. *Japan Ministry of Defense*, August 2023. Available at: https://www.mod.go.jp/en/d_act/sec_env/pdf/ch_d-act_a_e_230208.pdf

³² Ibid.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific Japan's defense over an incident around the Senkaku Islands.³³ Thus, a potential repercussion of China's maritime operations is that they increase the likelihood the U.S. would intervene on Japan's behalf.

The possibility of U.S. intervention in the Senkaku dispute suggests at least one of the PRC assumptions that underpin its near seas defense and far seas protection strategy may be flawed. While the assumptions that the PRC makes about its strategy are unknown, it is likely that Beijing would want to contain the Senkaku Island dispute to a bilateral issue between China and Japan and that China assumes it can do so. Moreover, Beijing may perceive its maritime operations are direct response to Japanese provocations. Whatever the assumption may be, the actions of China's maritime forces appear to have increased the potential for some sort of U.S. intervention which would complicate China's efforts around the Senkaku Islands and for Taiwan.

³³ "The Senkakus (Diaoyu/Diaoyutai) Dispute: U.S. Treaty Obligations," *Congressional Research Service*, February 21, 2017, pp. 1-7, Available at: <https://crsreports.congress.gov/product/pdf/R/R42761/21#:~:text=U.S.%20Administrations%20going%20back%20at,Security%20Treaty%20cover s%20the%20islands>.

The Spratly Islands are another strategic SLOC leading to Taiwan through the South China Sea. Experience protecting and defending this SLOC would be necessary for forces involved in any potential campaign against Taiwan because this SLOC controls the southern approaches to Taiwan and China. The CCG routinely conducts rights protection and law enforcement missions in the Spratly Islands with PLAN warships providing support, which helps to provide operational familiarization in these waters. However, China's maritime belligerence in the South China Sea invites global condemnation and an increased willingness of countries from outside the region to deploy forces to the region thereby further undermining PRC efforts to achieve its strategic objectives in the Spratly Islands and against Taiwan.

The early August CCG use of water cannons against a Philippine commercial resupply vessel during a resupply operation in support of Philippine Marines stationed at Second Thomas Shoal aboard the Sierra Madre is an example of how the execution of China's maritime rights protection missions undermines China's strategic objectives for Taiwan. Following the CCG use of water cannons on August 5th, multiple nations issued statements of condemnation of China's coercive actions.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific

Australia, Canada, Japan, and Germany all called CCG actions “dangerous” and “destabilizing”.³⁴ Moreover, the incident prompted several nations to deploy forces to the region to enhance cooperation with the Philippine armed forces. Two weeks after the incident, Australia deployed two warships to conduct a bilateral exercise with the Philippines.³⁵ In early September, the United States deployed a destroyer to sail with a Philippine Navy frigate to improve interoperability.³⁶ Japanese Maritime Self Defense Forces ships also deployed to the South China Sea in early September.³⁷ The presence of additional

³⁴ Brad Lendon & Kathleen Magramo, “International backlash grows after Chinese boats fires water cannon on Philippine boats”, *CNN*, August 7, 2023, Available at: <https://www.cnn.com/2023/08/07/asia/china-philippines-coast-guard-confrontation-south-china-sea-intl-hnk/index.html>.

³⁵ Dzirhan Mahadzir, “Japanese, U.S., the Philippine Drill in the South China Sea; China Contests U.S. Position on Territorial Disputes” *USNI News Online*, September 5, 2023. Available at: <https://news.usni.org/2023/09/05/japanese-u-s-the-philippines-drill-in-the-south-china-sea-china-contests-u-s-position-on-territorial-disputes#:~:text=Australia%20carried%20out%20the%20bilateral,Darwin%20to%20support%20the%20exercise>.

³⁶ “U.S., Philippine Navy conduct bilateral sail to enhance interoperability” *U.S. Seventh Fleet Public Affairs*, September 4, 2023, Available at: <https://www.c7f.navy.mil/Media/News/Display/Article/3514609/us-philippine-navies-conduct-bilateral-sail-to-enhance-interoperability/>

³⁷ “The Indo-Pacific Deployment 2023 (IPD23) Unit conducted an Anti-Submarine Warfare Exercise in the South China Sea.” *Japan Self Defense Fleet*, September 4, 2023, Available at: <https://www.mod.go.jp/msdf/sf/english/news/2023/09/0905.html>

forces in the South China Sea would likely complicate PRC planning for a Taiwan operation.

The international outrage that followed the CCG's use of water cannons against the Philippine resupply vessel is another example of flaws in the strategic assumptions of Beijing's near seas defense and far seas protection strategy. Beijing may have believed its maritime operations were a response to Philippine provocations that could prompt a regional backlash. Instead, they resulted in condemnation from around the world and enhanced maritime cooperation between the Philippine navy and with forces from outside the region, which presumably would undermine China's most important strategic objectives for Taiwan.

Line of Effort: Increase Combat Proficiency near Taiwan

A second pillar of China's near seas defense and far seas protection strategy appears to be for maritime forces to gain operational experience and improve combat capabilities in the immediate vicinity of Taiwan. The normalization of PLAN presence around Taiwan is indicative this pillar exists. While

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific

PLAN warships periodically operate around Taiwan, the visit of the U.S. Speaker of the House to Taipei in August 2022 appears to have routinized these deployments. Taiwan's Ministry of National Defense reported 14 PLAN ships operating around Taiwan as part of a PRC military response to the visit.³⁸ Since then, the PLAN has maintained a relatively constant presence around Taiwan averaging approximately 3-5 PLAN warships daily.³⁹ There have been periodic spikes in the number of PLAN ships. In July 2023, the PLAN deployed 16 warships around Taiwan and two months later, the PLAN deployed 20 ships - the most PLAN warships ever deployed around Taiwan.⁴⁰

This normalization of PLAN presence gives PLAN commanders real world experience and confidence operating in

³⁸ "PLA activities in the waters and airspace around Taiwan Aug. 7, 2023" *Ministry of National Defense Republic of China*. Available at: <https://twitter.com/MoNDefense/status/1556284247853629440?s=20&t=OVjmZli06jlzrMyhNHto4g>.

³⁹ "Tracking China's April 2023 Military Exercises around Taiwan", *Center for Strategic and International Studies*, Available at: <https://chinapower.csis.org/tracking-chinas-april-2023-military-exercises-around-taiwan/>

⁴⁰ Jack Lau, "Record 16 PLA warships sailed close to Taiwan in single day, island's defense minister says," *South China Morning Post*, July 17, 2023, Available at: <https://www.scmp.com/news/china/military/article/3228029/record-16-pla-warships-sailed-close-taiwan-single-day-islands-defence-ministry-says>

waters they would be expected to deploy to during a conflict with Taiwan. It likely enhances their inter and intra service combat capabilities and enables the PRC to control how much pressure it puts on Taiwan on any given day. It forces Taiwan's Ministry of National Defense to expend resources to track and monitor PLAN activity and to respond. Moreover, these deployments are a domestic and international signal of Beijing's resolve on the Taiwan issue.

While PLAN deployments provide many tactical and operational benefits, they contribute to a strategic backlash. Since the PLAN increased its presence around Taiwan, the United States has increased the periodicity of arms sale authorizations to Taiwan. One month after the Speaker of the House visit to Taipei in May 2022, the State Department announced a \$1.1 billion arms sale package that included 60 Harpoon anti-ship missiles.⁴¹ In March 2023, the State Department approved a \$619 million sale.⁴² Subsequent sale

⁴¹ Bryant Harris, "U.S. Approves \$1.1 billion Taiwan arms sale" *Defense News*, September 6, 2023, Available at: <https://www.defensenews.com/pentagon/2022/09/06/us-approves-11-billion-taiwan-arms-sale/>

⁴² Doug Cameron, "U.S. Approves Potential Taiwan Arms Sale Worth \$619 Million Amid China Tension", *Wall Street Journal*, March 2, 2023. Available at: <https://www.wsj.com/articles/u-s-approves-potential-taiwan->

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific announcements included authorization to expedite arms to Taiwan by taking arms out of existing stockpiles using the Presidential Drawdown Authority and authorization to use Foreign Military Financing (FMF) for arms purchases, which is paid for by U.S. taxpayers.⁴³ While many factors likely contribute to this uptick in arms sales, the persistent PLAN presence around Taiwan is a persistent reminder of PLAN coercive efforts and is a catalyst that underscores the urgency of these sales.

The PLAN's efforts to increase its combat proficiency in the vicinity of Taiwan suggests China's near seas defense and far seas protection strategy contains another flawed assumption. The PRC likely assumes that the United States would intervene in a Taiwan conflict. After all, many of China's combat capabilities appear oriented to counter U.S. capabilities. Despite this assumption, it would not be in China's interest for Taiwan to obtain military capabilities that enhance its defensive posture. Nevertheless, the PLA's persistent maritime and air pressure on Taiwan appears to be a factor contributing to the increase in the

arms-sale-worth-619-million-6e97a909

⁴³ "U.S. Arms Sales to Taiwan" *Forum on the Arms Trade*, Available at: <https://www.forumarmstrade.org/ustaiwan.html>

pace and scope of U.S. arms sales to Taiwan. While deployments of warships may provide the PLAN with operational experience, these maritime deployments have resulted in Taiwan enhancing its own defensive capabilities and developing a closer military relationship with the United States, which places China's strategic objectives for Taiwan at greater risk.

Line of Effort: Advance Strategic Interests in the Pacific Islands

A third line of effort of China's near seas protection and far seas defense maritime strategy is to use soft power maritime assets to enhance China's influence in the international community. The PLAN has supported this pillar by dispatching its Navy hospital ship for "Harmonious Mission" deployments throughout the region and the world. From 2008-2022, the hospital ship conducted eight Harmonious Mission deployments to 43 countries and provided medical services for approximately 250,000 people.⁴⁴ Previous Harmonious Mission deployments have been to Africa, Southeast Asia, Australia, Central and

⁴⁴ Zhao Lei, "PLA hospital ship to set off on Solomon Pacific tour", *China Daily Online*, July 2, 2023, Available at: <https://www.chinadaily.com.cn/a/202307/02/WS64a17c59a310bf8a75d6cc3a.html>

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific South America and the Caribbean.⁴⁵ Each 2–3-month long deployment consists of several week-long port calls throughout the region it is deployed. Upon arriving in port, PLA medical teams partner with local medical professionals to provide free health checks and to conduct surgical procedures for both the local population and the Chinese diaspora living abroad.⁴⁶ The visits include community relations and sports events, engagement with local leadership, and cultural performances.⁴⁷

China uses its state media to promote these deployments as a sign of China's goodwill.⁴⁸ It also uses its embassies abroad to promote these events to enhance China's image and to espouse the benefits of a close partnership with China.⁴⁹

⁴⁵ Prashanth Parameswaran, "China's Peace Ark Completes first-Ever Australia Visit", *The Diplomat*, October 16, 2015, Available at: <https://thediplomat.com/2015/10/chinas-peace-ark-completes-first-ever-australia-visit/>

⁴⁶ Huang Panyue, "PLA hospital ship Peace Ark sets sail for Harmonious Mission 2023", *China Military Online*, July 4, 2023. Available at: http://eng.mod.gov.cn/xb/News_213114/TopStories/16235051.htm

⁴⁷ "The Visit of the Peace Ark a Complete Success" *Embassy of the PRC in Kiribati*, July 7, 2023. Available at: http://ki.china-embassy.gov.cn/eng/sghd/202307/t20230723_11116741.htm

⁴⁸ "China's hospital ship 'Peace Ark' Competes First Visit to Kiribati," *Xinhua Online*, July 24, 2023, Available at: <https://english.news.cn/20230724/d31b741639314f6182f28fb44b44840c/c.html>

⁴⁹ "Chinese Naval Hospital Ship Concludes Successful Medical Mission in Tonga" *Tonga Independent*. Available at: <https://tongaindependent.com/health/chinese-naval-hospital-ship->

Harmonious Mission deployments promote military cooperation with the PRC and send a strong message about the tangible benefits that countries receive through a partnership with the PRC.

In July 2023, the PLAN hospital ship traveled to the Pacific Islands for its ninth Harmonious Mission deployment. This was the third time it deployed to the Pacific Islands following visits in 2014 and 2018.⁵⁰ While the PLAN has used this hospital ship for humanitarian deployments around the world, the frequency of its visits to Pacific Island nations suggests the PRC is disproportionately focused on using these deployments to enhance its image and to build stronger partnerships in this strategic region.

Repeated deployments to the Pacific Islands coupled with official diplomatic engagement by senior Beijing leadership, helps to promote PRC infrastructure deals. They also advance modest security agreements that could allow China to establish a military foothold in this region, such as that which China concluded with the Solomon Islands in 2022.

concludes-successful-medical-mission-in-tonga/

⁵⁰ Tang Siyu & Wu Kangci, “Chinese naval hospital ship Peace Ark provides medical service in Tonga” *China Military Online*, July 31, 2023, Available at: http://eng.mod.gov.cn/xb/News_213114/TopStories/16241228.html

The Pacific Islands are located southeast of Taiwan and would be a logical location where U.S. logistics forces could be deployed to support intervention in a Taiwan conflict. The United States has operating rights over the airspace and waters of several Pacific Island nations.⁵¹ Increased PLA military access in the Pacific Islands potentially could threaten western military forces operating from Pacific Islands by providing China with a military and intelligence infrastructure that can track and report on U.S. military activity operating around the Islands. As a result, these Harmonious Mission humanitarian deployments help to advance China's strategic interests by serving as a supporting effort for China's military and maritime strategic objectives related to Taiwan.

While China's navy hospital ship helps to advance China's maritime strategic interests, other Chinese maritime resources, such as China's Distant Water Fishing Fleet (DWF), contribute to undermining these strategic gains. China is a leading country responsible for Illegal, Unreported, and Unregulated (IUU)

⁵¹ Simone McCarty, "Why the sparsely-populated South Pacific islands have become the next US-China contest," *CNN*, June 6, 2022, Available at: <https://www.cnn.com/2022/06/06/asia/china-pacific-islands-wang-yi-intl-hnk/index.html>

fishing in the region.⁵² While the exact economic impact of China's IUU fishing on the Pacific Island region is unknown, one study estimates the worldwide economic impact losses due to the diversion of fish from legitimate trade as costing \$26 billion to \$50 billion annually and potential losses to countries' tax revenues worth approximately \$2 billion to \$4 billion annually.⁵³ The actions of China's DWF contributes to this loss of revenue and harms China's reputation in the Pacific Islands. It also suggests China's efforts to advance its strategic interests in the Pacific Islands as a part of its maritime strategy may not be a synchronized efforts across all of China's maritime resources.

Implications

The execution of China's near seas defense and far seas protection strategy with its Taiwan-related end objectives has several implications for Taiwan and the region as whole. One of the most important of these is that the frequency and scope of

⁵² "China's Role in the Exploitation of Global Fisheries: Issues for Congress" *Congressional Research Service*, April 12, 2022, Available at: <https://crsreports.congress.gov/product/pdf/R/R47065/1>

⁵³ U.R. Sumaila et al., "Illicit Trade in Marine Fish Catch and its Effects on Ecosystems and People Worldwide," *Science Advances*, Vol. 6, No. 9, February 26, 2020, pp. 1-7.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific
PRC maritime activities around Taiwan are likely to gradually increase.

Taiwan's MND routinely tracks the numbers of PLAN combatants operating in its vicinity and publishes these numbers daily on X (formerly Twitter). While a critical part of China's maritime strategy, PLAN combatant operations around Taiwan are just one of the means available to China. Under State Council guidance and direction, the PRC could expand the maritime resources it allocates to support this line of effort. The PRC could begin to integrate other maritime resources into this strategy.

Recent Maritime Safety Administration (MSA) operations suggest the PRC may be integrating more non-military assets into its near seas defense and far seas protection strategy to advance its Taiwan objectives. The inspection operations carried out by the MSA Haixun 6 in the central and northern parts of the Taiwan Strait are evidence of this.⁵⁴ In May of 2023, the MSA announced the Haixun 6 would conduct a patrol and inspection operations in the northern and central parts of the Taiwan

⁵⁴ The Haixun 6 is a 128-meter long MSA vessel based in Fujian Province. It is the first large vessel designated to patrol and provide services in the Taiwan Straits.

Straits.⁵⁵ While at first blush, inspection operations may sound benign, the implication of the announcement was that Taiwan commercial shipping would be subjected to MSA inspections – a direct challenge to Taiwan’s autonomy. This patrol was announced while Taiwan’s President transited through the United States following a meeting with the U.S. Speaker of the House during a time when cross-Strait tensions were elevated. Although the Haixun 6 never inspected Taiwan’s shipping during the patrol, the announcement is illustrative of how the PRC can leverage additional non-military maritime resources to increase its maritime pressure on Taiwan and how non-military resources can support the Taiwan objectives within the near seas defense and far seas protection strategy.

Similarly, China’s could take advantage of its international commercial port infrastructure to provide intelligence on shipping involved in supporting intervention in a Taiwan contingency. China owns 96 ports globally and Chinese law requires that all Chinese companies operating overseas must gather and report intelligence on foreign entities to the Chinese

⁵⁵ Jiang Chenglong, “Joint patrol underway in Taiwan Straits” *China Daily Online*. April 5, 2023, Available at: <https://www.chinadaily.com.cn/a/202304/05/WS642d2d6ba31057c47ebb8713.html>

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific government.⁵⁶ Many of these ports use communications and other technologies that enable ports to track vessel and cargo status, customs and payment data, geolocation etc. Such information would be invaluable to Chinese military planners involved in supporting PLA's Taiwan operations as it would enable the PRC to identify trade and supply chain vulnerabilities and to track the transport of military equipment destined for the region.⁵⁷

Another implication of the Taiwan objectives of the near seas defense and far seas protection strategy is that China's navy will continue to develop capabilities to operate globally but will be primarily oriented toward improving the capabilities necessary to execute Taiwan-related operations. Naval bases in Djibouti, Ream Cambodia, and possibly future bases in Africa will enhance PLAN capabilities to logistically support a more robust PLAN overseas presence and would support maritime

⁵⁶ Isaac Kardon & Wendy Leutert, "China's Port Power". *Foreign Affairs*. May 22, 2023, Available at: <https://www.foreignaffairs.com/united-states/chinas-port-power#:~:text=According%20to%20data%20from%20Drewry,world's%20top%20100%20container%20ports>.

⁵⁷ Elaine Dezenski & David Rader, "How China Uses Shipping for Surveillance and Control," *Foreign Policy*, September 20, 2023, Available at: <https://foreignpolicy.com/2023/09/20/china-shipping-maritime-logistics-lanes-trade-ports-security-espionage-intelligence/>

missions that advance China's overseas strategic interests. Although China's deployments to Europe, South America, and the Middle East demonstrate China's navy global reach, these deployments are a token force and consist of a handful of ships at any given time. The PLAN, however, appears to prioritize advancing the tactics and capabilities in the SLOCs leading to Taiwan through the near seas and the western Pacific. The robust exercises in September 2023 east of Taiwan, the near continuous presence of PLAN ships around Taiwan since May 2022, and regular PLAN exercises in the South and East China Sea are evidence of this prioritization.

A third implication of China's near seas defense and far seas protection strategy is that China's near term strategic approach to how it conducts its maritime operations is unlikely to change significantly. In some cases, China's maritime forces have increased the use of the exact tactics that invite an international response which directly challenge the PRC's ability to achieve its strategic Taiwan objectives. The PRC may believe it is simply responding to changes to conditions in the external environment. The CCG continues to harass fishing vessels in the South China Sea, China's DWF fleet increasingly

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific routinely encroaches on the exclusive economic zones of neighbors, and coercive PLAN operation around Taiwan are increasing. Therefore, a third implication is that the execution of China's maritime strategy is likely to continue to be a source of regional instability over the mid to long term.

Conclusion

The strategic guidelines and white papers make it clear that sovereignty issues in the maritime domain are the priority for the PLA. Of these sovereignty issues, opposing and containing Taiwan independence is most important of these objectives. For this reason, the PRC is likely to prioritize the development of maritime capabilities that would support a Taiwan-related contingency over global operations.

In order to support this strategic objective, PRC maritime forces execute SLOC protection through maritime rights and protection missions, they improve their combat capabilities operating around Taiwan, and advance China's strategic interests in the Pacific Islands. These three lines of effort, however, highlight what appears to be flawed strategic assumptions and poor synchronization across China's maritime resources which undermines China's strategic objectives.

Rights protection and law enforcement missions may enhance China's ability to protect the SLOCs, but have resulted in regional resistance and an increased presence of forces from outside the region that would likely complicate China's ability to execute a campaign against Taiwan. Similarly, PLAN operations around Taiwan advance military capabilities necessary for any cross-Straits contingency, but these operations contribute to Taipei acquiring defensive weapons systems that would make a PRC military campaign against Taiwan more difficult. In addition, the adverse economic impacts of China's IUU fishing undermines China's persistent efforts to advance strategic interests in the Pacific Islands, which is a region that could be used to logistically support U.S. intervention in a Taiwan contingency.

Beijing may be cognizant of these apparent flaws and be unwilling or unable to make the necessary strategic adjustments that would enhance the strategy's efficacy. Domestic political factors such as nationalism and hierarchical decision making or perceptions of changes to the external geopolitical context could all help to explain Beijing's embrace of these apparent flaws. Alternatively, Beijing may believe its near seas defense and far

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific seas protection strategy accounts for the repercussions that naturally come in response to the PRC's execution of these three lines of effort. Regardless, China does not appear to be significantly adjusting to its strategic approach and instead seems to be increasing the frequency of such maritime operations. As a result, China's near seas defense and far seas protection strategy will continue to be a significant cause of regional instability and may increase tensions in the region for the foreseeable future.

Although a national maritime strategy may not be codified formally, the near seas defense and far seas protection strategy provides the contours of a national maritime strategy to guide the efforts of both military and nonmilitary maritime resources. While this strategic guidance is most applicable to military forces, it also provides a framework for nonmilitary forces to support the strategy's objectives.

It allows organizations such as the MSA to support national objectives by integrating their resources and operations into the strategy such as through inspection operations. Similarly, the strategy contains the guidance and provides the State Council's legal authorities to enable commercial operations, such as

China's international port infrastructure, commercial roll on and roll off ferries, and its fishing fleet to be integrated into PLA operations to support Taiwan-related military objectives.

As more maritime resources are integrated to support the near seas defense far seas protection strategy, the PRC will need to synchronize their efforts. While there are incidents of China's maritime resources undermining PRC strategic goals, PRC has demonstrated it is capable of the necessary synchronization such as during the recent Philippine resupply effort to Second Thomas Shoal. Over time, China will gradually improve its ability to harness and additional maritime resources which will enable its near seas defense and far seas protection strategy to serve as the foundation and framework for a national maritime strategy.

China's Flawed Maritime Strategy and Its Implications for the Indo Pacific

Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion of Taiwan

Takayuki IGARASHI (五十嵐隆幸)

Research Fellow, China Division, Regional Studies Department,
National Institute for Defense Studies

Misato KUROI (黒木美里)

Student, Master's Course, Graduate School of Social Sciences,
Nanzan University

Abstract

After Russia's invasion of Ukraine, various experts have discussed the possibility of a Chinese invasion of Taiwan. However, they provide no clear answer as to why China remained ambiguous in its support for Russia and did not invade Taiwan. Using textual analysis based mainly on press materials and expert opinions, this article clarifies why China did not invade Taiwan in conjunction with Russia's invasion of Ukraine, points out the similarities and differences between Ukraine and Taiwan, and analyzes the impact of the Ukraine issue on the Taiwan Strait Crisis and its future implications. Although common sense suggests that China will not invade Taiwan, the

incumbent Xi Jinping may not act in a rational manner. We must respond immediately to the rapidly changing international situation and rally humanity's wisdom to prevent a repetition of tragic history.

Keywords: Taiwan, China, Ukraine, Russia, asymmetric power

I. Introduction

On February 24, 2022, Russia launched a military invasion of Ukraine. This compelled Taiwanese citizens to compare Chinese President (*Zhongguo guojia zhuxi*, 中國國家主席) Xi Jinping (習近平) to Vladimir Putin, who had launched the invasion, as they were reminded that the devastation in Ukraine reported by the media could be “Taiwan’s tomorrow”.¹ When the U.S. forces withdrew from Afghanistan in August 2021, it undermined the confidence of the Taiwanese people and there was widespread concern that the United States was bound to abandon Taiwan in the event of a future Taiwan Strait crisis, an anxiety expressed in the phrase “today Afghanistan, tomorrow Taiwan”.² Further, when President Biden made it clear that the

¹ Thompson Chau, “Taipei plays down fears of ‘Ukraine today, Taiwan tomorrow,’” *Nikkei Asia*, March 1, 2022, <<https://asia.nikkei.com/Politics/Ukraine-war/Taipei-plays-down-fears-of-Ukraine-today-Taiwan-tomorrow>>.

² Chris Li and Joshua Tupler, “Afghanistan today is not Taiwan tomorrow,” *Harvard Kennedy School*, August 23, 2021, <<https://www.belfercenter.org/publication/afghanistan-today-not-taiwan-tomorrow>>; Jen Psaki and Jake Sullivan, “Press briefing by Press Secretary Jen Psaki and National Security Advisor Jake Sullivan,” *The White House*, August, 17, 2021, <<https://www.whitehouse.gov/briefing-room/press-briefings/2021/08/17/press-briefing-by-press-secretary-jen-psaki-and-national-security-advisor-jake-sullivan-august-17-2021/>>.

U.S. would not dispatch forces inside Ukraine,³ there was widespread concern in Taiwan that the U.S. would abandon Taiwan if China invaded the island.⁴

Sun Tzu's *Art of War* (*Sunzi bingfa*, 孫子兵法) states, “supreme excellence consists in breaking the enemy’s resistance without fighting (*zhigao wushang de zhuoyue baokuo zai bu zhandou de qingkuang xia dapo diren de dikang*, 至高無上的卓越包括在不戰鬥的情況下打破敵人的抵抗)”; President Xi Jinping emphasized at the congress commemorating the 110th anniversary of the Revolution of 1911 (*Xinghai gemin*, 辛亥革命) on October 9, 2021, that unification with Taiwan would be achieved peacefully.⁵ However, since 2020, the number of Chinese military aircraft intruding into the Taiwan Air Defense

³ Brad Lendon, “Taiwan watches China as China and the world watch Ukraine,” CNN, March 8, 2022, <<https://edition.cnn.com/2022/03/08/asia/taiwan-china-ukraine-russia-wu-intl-hnk/index.html>>.

⁴ Baiyuan Zhang, “*Bàidēng bù chūbīng Wūkèlán āipī Zhāng Zhīhào: Měijūn fù Ōulù zhànchǎng wǔ xiágù Táihǎi shì Hǎoshì ma* [拜登不出兵烏克蘭挨批 張之豪: 美軍赴歐陸戰場無暇顧台海是好事嗎, Biden did not send troops to Ukraine, criticized by Zhang Zhihao: Is it a good thing that the U.S. military goes to the European battlefield and has no time to care about the Taiwan Strait?” *Newtalk*, February 26, 2022, <<https://newtalk.tw/news/view/2022-02-26/715593>>.

⁵ “China marks 1911 Revolution anniversary, pooling strength for national rejuvenation,” *People’s Daily Online*, October 10, 2021, <<http://en.people.cn/n3/2021/1010/c90000-9905241.html>>.

Identification Zone (*Taiwan fangkong shibie qu*, 臺灣防空識別區) has continued to increase.⁶

Furthermore, China has since increased its military pressure in visible ways, such as by publicizing military exercises in which it considered Taiwan a target for attack.⁷ Some believe that under Xi Jinping's administration, China might shift toward a more coercive policy to push forward unification backed by armed forces.⁸ Amidst this growing concern about the Taiwan Strait crisis, after the start of the Russian invasion of Ukraine, experts in various media have been explaining the similarities and differences between Ukraine and Taiwan, while sounding the alarm that China may invade Taiwan, just as Russia invaded Ukraine.⁹

⁶ Eric Chang, "8 Chinese military aircraft enter Taiwan's ADIZ: Taiwan sent aircraft, broadcast radio warnings, deployed air defense missiles to monitor PLAAF aircraft," *Taiwan News*, February 27, 2022, <<https://www.taiwannews.com.tw/en/news/4456789>>.

⁷ John Feng, "China sends 30 warplanes near Taiwan in largest training drill in months," *Newsweek*, May 31, 2022, <<https://www.newsweek.com/china-taiwan-warplanes-aircraft-air-defense-zone-1711526>>.

⁸ Yasuhiro Matsuda, "Russian invasion may sway China against a forceful approach to Taiwan," *The Japan Times*, April 28, 2022, <<https://www.japantimes.co.jp/opinion/2022/04/28/commentary/world-commentary/china-taiwan-russia/>>.

⁹ Clay Chandler, "The parallels are undeniable, but Taiwan is not the next Ukraine. Here are 4 reasons why," *Fortune*, March 5, 2022, <<https://fortune.com/2022/03/04/china-taiwan-ukraine-invasion-russia/>>.

On July 12, 2021, after publishing an article entitled “On the historical unity of Russians and Ukrainians”,¹⁰ Putin deployed troops around the Ukrainian border,¹¹ and reiterated his opposition to the North Atlantic Treaty Organization’s (NATO’s) eastward expansion.¹² Many experts believed that common sense would suggest that Russia was unlikely to invade Ukraine, and therefore they were optimistic.¹³ However, Putin decided to invade Ukraine. In retrospect, people in the 1930s, believing that Germany, Italy, and Japan, along with their inferior national powers, would not choose the path of war, could be considered optimistic as well.

¹⁰ Maria Domanska, “Putin’s article: ‘On the historical unity of Russians and Ukrainians,’” *Centre for Eastern Studies*, July 2021, <<https://www.osw.waw.pl/en/publikacje/analyses/2021-07-13/putins-article-historical-unity-russians-and-ukrainians>>.

¹¹ Paul Sonne, Robyn Dixon and David L. Stern, “Russian troop movements near Ukraine border prompt concern in U.S., Europe,” *The Washington Post*, October 30, 2021, <https://www.washingtonpost.com/world/russian-troop-movements-near-ukraine-border-prompt-concern-in-us-europe/2021/10/30/c122e57c-3983-11ec-9662-399cfa75efee_story.html>.

¹² “Russia views Taiwan as part of China, proceeds from that premise – Lavrov,” *Interfax*, October 12, 2021, <<https://interfax.com/newsroom/top-stories/72864/>>.

¹³ “Ukraine crisis, experts see it this way. What are the ‘five spoils’ that President Putin got?” *HuffPost Japan*, February 20, 2022, <https://www.huffingtonpost.jp/entry/ukraine_jp_621107fce4b06212585df283>.

The Biden administration, which came into office in January 2021, inherited the vigorous attitude toward China that was adopted by the Trump administration, but it sought to shift away from unilateralism, as represented by the phrase “America First,” and set out to return to international cooperation. Many intellectuals welcomed and expected these changes. However, in 1939, E. H. Carr argued in *The Twenty Years' Crisis 1919–1939* that we must not forget that the essence of international society is power politics, in which the power of nations is the most important element, and he repeatedly warned of the danger of idealism lacking an awareness of power.¹⁴ Thus, the disastrous history of attempts to change the status quo with power has been repeated.

History reveals that major wars often erupt when international order is destabilized by the rise of emerging powers and the balance of power is upset. Organski argued that the danger of war increases when a state that has rapidly increased its power through industrialization becomes a challenger dissatisfied with the current international order and seeks to

¹⁴ E.H. Carr, *The Twenty Years' Crisis 1919–1939: An Introduction to the Study of International Relations Second Edition* (London: Macmillan, 1946), [Japanese trans., Y. Hara], (Iwanami Bunko, 2011).

establish a new order.¹⁵ Shortly after the turn of the millennium, Mearsheimer and others warned that the rise of China could destabilize the global system.¹⁶ In East Asia, where China's gross domestic product (GDP) surpassed Japan's in 2010 and the region has faced a power shift, there has been growing concern about "changing the status quo by force," referring to how China may eliminate the involvement of extraterrestrial powers and threaten the rights and interests of countries both inside and outside the region.¹⁷

Before Russia launched its invasion, some observers described a nightmare scenario in which President Putin invaded Ukraine and, simultaneously, President Xi used force to reunify Taiwan with China.¹⁸ However, China did not invade Taiwan

¹⁵ A.F.K. Organski, *World Politics*, NY: Alfred Knopf, 1958.

¹⁶ Jed Babbin and Edward Timperlake, *Showdown: Why China wants war with the United States* (Washington, DC: Regnery, 2006); John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001).

¹⁷ Hiroki Kusano, "The rise of Japan and the United States and the linkage between their regional orders: The function of the Monroe Doctrine in justifying hegemony in East Asia and the Americas," *International Relations*, 183, March 2016, pp. 31-44.

¹⁸ Jen Psaki and Jake Sullivan, "Press briefing by Press Secretary Jen Psaki and National Security Advisor Jake Sullivan," *The White House*, December 7, 2021, <<https://www.whitehouse.gov/briefing-room/press-briefings/2021/12/07/press-briefing-by-press-secretary-jen-psaki-and-national-security-advisor-jake-sullivan-december-7-2021/>>.

alongside Russia's invasion of Ukraine. China, which believes it is best to "win without fighting," will probably seek to unify Taiwan by exercising "sharp power," as proposed by Christopher Walker and Jessica Ludwig, rather than by using hard power, as Russia has done, to achieve its aims.¹⁹ It would then be a difficult task to shed light on the situation in Taiwan based on the case of the Russian invasion of Ukraine. However, it is important to compare the situation in Ukraine and Taiwan and analyze the possibility of a Chinese military invasion of Taiwan to guard against optimism and avoid repeating a tragic history.

As seen above, Russia's invasion of Ukraine has generated a variety of opinions that dwell on the similarities and differences between Ukraine and Taiwan, and discuss the possibility of a Chinese invasion of Taiwan. However, none of these views attempt to clearly answer why China has neither unambiguously supported Russia nor invaded Taiwan. In

¹⁹ Christopher Walker and Jessica Ludwig, "The meaning of sharp power: How authoritarian states project influence," *Foreign Affairs*, November 2017, <<https://www.foreignaffairs.com/articles/china/2017-11-16/meaning-sharp-power>>; Christopher Walker and Jessica Ludwig, "From 'soft power' to 'sharp power': Rising authoritarian influence in the democratic world," in *Sharp Power: Rising Authoritarian Influence*, Washington: National Endowment for Democracy, 2017, pp. 8–25.

response to these views, this article uses the method of textual analysis, mainly based on press materials and expert opinions as sources of information, and formulates and tests three hypotheses: 1. If Russia wins in Ukraine, China will be encouraged to invade Taiwan, Yes or No? And why? 2. If Russia loses in Ukraine, China will be discouraged from invading Taiwan, Yes or No? And why? and 3. If Russia loses in Ukraine, China will be discouraged but will increase and accelerate to invade Taiwan, since opportunity in loss, Yes or No? And why? This article first clarifies why China did not invade Taiwan in conjunction with Russia's invasion of Ukraine, by comparing the tensions in the Taiwan Strait with the developments in Ukraine that led to the outbreak of war, then points out the similarities and differences between Ukraine and Taiwan. Regarding similarities, we identify power differentials that lead to military aggression with respect to Russia and Ukraine, and China and Taiwan, respectively, and also note that in recent years Russia and China have stepped up election intervention and other activities through cyberspace. Regarding differences, we compare the geographical environments of Ukraine and Taiwan and confirm their respective positions in the global

economy, and then examine the “alliance” with the major powers in the current situation of dysfunction in the collective security of the United Nations. Based on the above considerations, while considering three hypotheses, we will formulate and discuss them to answer the question, “Today Ukraine, tomorrow Taiwan?” Finally, this article analyzes the impact of Russia’s invasion of Ukraine on the Chinese government’s vision and its future implications.

II. Tense Taiwan Strait Situation and Russia’s Invasion of Ukraine

China-Russia Joint Patrol and Russian References to the “Taiwan Issue”

On October 17, 2021, a spokesperson for the Eastern Theater Command of the People’s Liberation Army (PLA) criticized the U.S. Navy destroyer and Royal Canadian Navy frigate that had sailed through the Taiwan Strait on October 15, saying that “U.S. and Canada stirred up troubles in cahoots, which seriously jeopardized the peace and stability across the Taiwan Strait,” and further expressed his confrontational stance

by stating that the PLA's troops were "ready to resolutely counter all threats and provocations."²⁰

The next day, as if to counter the U.S. and Canada, 10 Chinese and Russian warships that had been participating in the Sea Interaction 2021 exercise until October 17 sailed from the Sea of Japan to the Pacific Ocean through the Tsugaru Strait (*Jinqing haixia*, 津輕海峽) between the Japanese home islands of Honshu (*Benzhou*, 本州) and Hokkaido (*Beihaidao*, 北海道). This was the first time that naval vessels from both countries had sailed jointly through the strait (Mahadzir, 2021).²¹ The combined fleet then moved southward in the Pacific Ocean, passing through the Osumi Strait (*Dayu haixia*, 大隅海峽) simultaneously for the first time on October 22, exiting the East China Sea. Both the Russian and Chinese defense ministries issued statements on October 23 at the end of the joint sail. The Russian Defense Ministry stated that this was the first time the

²⁰ "US, Canada jeopardize peace across Taiwan Strait: PLA spokesperson," *Ministry of National Defense of the People's Republic of China*, October 17, 2021, <http://eng.mod.gov.cn/news/2021-10/17/content_4897053.htm>.

²¹ Dzirhan Mahadzir, "10 Chinese, Russian warships sail through Japanese islands," *USNI News*, October 19, 2021, <<https://news.usni.org/2021/10/19/10-chinese-russian-warships-sail-through-japanese-islands>>.

Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion of Taiwan

countries had conducted joint patrols in the Western Pacific.²²

Chinese military analysts pointed out that joint naval exercises, the tenth since 2012, had a balancing significance and could counter the then newly formed (in September) AUKUS between the U.S., the U.K., and Australia.²³

Until then, Russia had avoided getting deeply involved in the “Taiwan issue (*Taiwan wenti*, 臺灣問題),” but following the inauguration of AUKUS, it made a series of in-depth statements on the situation. On October 12, Foreign Minister Sergei Lavrov was asked by the Interfax News Agency whether Russia viewed the current situation around Taiwan as a threat to regional security, to which he replied, “Just like the overwhelming majority of other countries, Russia views Taiwan as part of the People’s Republic of China.”²⁴ In an exclusive *CNBC* interview on the occasion of the Russian Energy Week International

²² Dzirhan Mahadzir, “Russia, China wrap up drills off Japan, pledge more joint exercises,” *USNI News*, October 25, 2021, <<https://news.usni.org/2021/10/25/russia-china-wrap-up-drills-off-japan-pledge-more-joint-exercises>>.

²³ Dongxu Wei, “China-Russia coordination helps break AUKUS encirclement,” *Global Times*, October 19, 2021, <<https://www.globaltimes.cn/page/202110/1236726.shtml>>.

²⁴ “Putin proposes beginning substantive talks to guarantee NATO won’t expand eastward,” *Interfax*, December 1, 2021, <<https://interfax.com/newsroom/top-stories/73273/>>.

Forum 2021 on October 13, Russian President Vladimir Putin criticized AUKUS as undermining regional stability, as the alliance could develop in unprecedented ways and create additional problems in the region.²⁵ Putin further expressed the view that China was a powerful economy, and that by increasing its economic potential, China did not need to use force to achieve its desired unification with Taiwan.²⁶

Furthermore, on November 23, the Chinese State Councilor and Minister of National Defense General Wei Feng-he (魏鳳和) and Defense Minister of the Russian Federation General Sergei Shoigu held an online meeting and confirmed that they continued to deepen strategic coordination and strengthen cooperation in strategic exercises and joint patrols to make new contributions to safeguard the core interests of the two countries and to protect international and regional security and stability.²⁷

²⁵ Hadley Gamble, “CNBC exclusive transcript: Vladimir Putin, President, Russia,” *CNBC*, October 14, 2021, <<https://www.cnbc.com/2021/10/14/cnbc-exclusive-transcript-vladimir-putin-president-russia.html>>.

²⁶ Elliot Smith, “President Putin on Taiwan: ‘China does not need to use force’”, *CNBC*, October 13, 2021, <<https://www.cnbc.com/2021/10/13/president-putin-on-taiwan-china-does-not-need-to-use-force.html>>.

²⁷ “Chinese, Russian defense ministers hold talks via video link,” *Ministry of National Defense of the People’s Republic of China*, November 23, 2021, <http://eng.mod.gov.cn/news/2021-11/19/content_4899162.htm>.

Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion of Taiwan

On November 19, the Ministry of National Defense of the People's Republic of China and the Ministry of Defense of the Russian Federation jointly declared the air forces of China and Russia would be holding a joint aerial strategic patrol in the Asia-Pacific region.²⁸

Concerns about the Link between the Tense Situation in Ukraine and Taiwan

Meanwhile, the international community's attention began to shift to Eastern Europe rather than the Taiwan Strait. On July 12, after publishing an article titled "On the historical unity of Russians and Ukrainians", Putin reiterated his opposition to "NATO expansion eastward" and sent troops to the Ukrainian border area.²⁹ *The Washington Post* reported on October 30 that Russia had stationed nearly 90,000 troops near the Ukrainian border even after the conclusion of Zapad 2021, a joint military exercise conducted in Belarus in mid-September.³⁰ U.S. Secretary of State Blinken strongly rebuked Russia, saying, "We

²⁸ "China, Russia hold annual joint aerial strategic patrol," *Ministry of National Defense of the People's Republic of China*, November 19, 2021, <http://eng.mod.gov.cn/news/2021-11/19/content_4899162.htm>.

²⁹ Domanska, op.cit.

³⁰ Sonne, Dixon and Stern, op.cit.

are concerned by reports of unusual Russian military activity near Ukraine. We are monitoring the region very closely, as we always do” and “any escalatory or aggressive actions would be of great concern to the U.S.”³¹

However, on December 3, *The Washington Post* reported that Russia planned to call for a military offensive against Ukraine as early as 2022, mobilizing up to 175,000 personnel, along with the nightmare scenario of China launching an invasion of Taiwan while the international community’s attention was focused on Eastern Europe.³² At a press briefing held at the White House on December 7, a question was raised regarding whether the U.S. government was prepared to deal with such a scenario, but National Security Advisor Sullivan avoided giving a clear answer, saying, “The United States is going to take every action that we can take, from the point of

³¹ Antony J. Blinken, “Remarks: Secretary Antony J. Blinken and Ukrainian Foreign Minister Dmytro Kuleba [Press release],” *U.S. Department of State*, November 10, 2021, <<https://www.state.gov/secretary-antony-j-blinken-and-ukrainian-foreign-minister-dmytro-kuleba-at-a-joint-press-availability-2/>>.

³² Shane Harris and Paul Sonne, “Russia planning massive military offensive against Ukraine involving 175,000 troops, U.S. intelligence warns,” *The Washington Post*, December 3, 2021, <https://www.washingtonpost.com/national-security/russia-ukraine-invasion/2021/12/03/98a3760e-546b-11ec-8769-2f4ecd7a2ad_story.html>.

view of both deterrence and diplomacy, to make sure that the Taiwan scenario you just described never happens.”³³ One military expert, who understood that the Biden administration had decided to withdraw from Afghanistan to concentrate on its policy toward China, analyzed that the U.S. lacked the ability to carry out a two-front war in Ukraine and Taiwan and urged Taiwan to strengthen its vigilance.³⁴

In early 2022, Seth Cropsey, a senior fellow at the Hudson Institute, and others, while revealing that U.S. officials were beginning to focus on Taiwan as well, warned that although Ukraine and Taiwan are geographically distant, these events should not be considered in isolation because of similarities in Russian and Chinese strategic and historical thinking. He then pointed out that the challenge for the PLA in the operation to invade Taiwan would be whether it can take Taiwan before the U.S. and its allies make a move, and that if China and Russia

³³ Psaki and Sullivan, “Press briefing by Press Secretary Jen Psaki and National Security Advisor Jake Sullivan,” December 7, 2021.

³⁴ Yongtian Ji (紀永添), “Éíuósī yīdàn rùqín Wūkēlán Táiwān bìxū lìkè jiāqiáng jièbèi [俄羅斯一旦入侵烏克蘭 台灣必須立刻加強戒備, If Russia invades Ukraine, Taiwan must immediately increase its vigilance],” *Up Media*, December 15, 2021, <https://www.upmedia.mg/news_info.php?Type=2&SerialNo=132419>.

have strategic cooperation, the Russian Pacific Fleet could block the actions of the U.S. and Japanese fleets, thus increasing the probability of a successful Chinese invasion of Taiwan. As a simultaneous invasion by China and Russia would place a heavy burden on the U.S. and its allies, he urged Taiwan to build a system that would allow it to defend itself as much as possible.³⁵

On January 17, *Reuters* and other media reported that Russian military forces began arriving in Belarus for a joint exercise in February, further escalating tensions over Ukraine.³⁶ Meanwhile, as Putin announced his intention to attend the opening ceremony on February 4, and other countries decided on a “diplomatic boycott” of the Olympics, it was leaked that Xi Jinping, who is seeking a third consecutive term at the National Congress of the Chinese Communist Party (CCP) in the fall of 2022, and trying to enhance his prestige with a “Successful Olympics,” may have asked Putin not to invade Ukraine during

³⁵ Seth Cropsey, “The two-headed fight for Ukraine and Taiwan,” *The Wall Street Journal*, January 4, 2022, <<https://www.wsj.com/articles/the-two-headed-fight-ukraine-and-taiwan-china-russia-putin-nato-biden-us-fronts-invasion-11641308211>>.

³⁶ “Russian forces arrive in Belarus for joint military drills,” *Reuters*, January 17, 2022, <<https://www.reuters.com/world/europe/russia-belarus-plan-joint-military-drills-february-lukashenko-2022-01-17/>>.

Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion
of Taiwan

the Olympic and Paralympic Games.³⁷ However, Russia invaded Georgia during the Summer Olympics in Beijing in 2008 and annexed the Crimean Peninsula in southern Ukraine shortly after the closing of the Sochi Winter Paralympics in March 2014, heightening concerns that Russia would invade even during the Olympic and Paralympic Games, which have otherwise been called a “festival of peace.”³⁸

The Unfolding Diplomatic Battle and the Start of Russia's Invasion of Ukraine

On February 4, 2022, the Beijing Winter Olympics opened. At Xi Jinping's invitation, Putin paid a visit to Beijing, and after the meeting, the two heads issued a joint statement calling for enhanced strategic cooperation. The two countries opposed further enlargement of NATO and expressed serious concerns

³⁷ Alberto Nardelli and Evgenia Pismennaya, “Putin could burst Xi's Olympic dream with a war in Ukraine,” *Bloomberg*, January 22, 2022, <<https://www.bloomberg.com/news/articles/2022-01-22/ukraine-crisis-beijing-olympics-may-affect-russia-s-vladimir-putin-s-thinking>>.

³⁸ Jennifer Hansler and Jeremy Herb, “US suggests Winter Olympics could influence Russia's military planning in Ukraine,” *CNN*, January 26, 2022, <<https://edition.cnn.com/2022/01/26/politics/russia-china-olympics-ukraine/index.html>>.

about the formation of AUKUS.³⁹ Then, after Putin's return, France and Germany stepped in to "intercede" to prevent war. Despite this, Russia and Belarus began a joint military exercise called Union Resolve 2022 (*Lianmeng juexin 2022*, 聯盟決心 2022), on February 10.⁴⁰

As tensions continued to mount in Europe, the Fourth Japan–Australia–India–U.S. (the Quad) Foreign Ministers' Meeting was held in Melbourne, Australia. At the meeting, the participants agreed to work together to counter challenges to the maritime order based on rules in the East and South China Seas, with an eye to China's increasing hegemonic behavior, and confirmed that they would deepen cooperation in a wide range of areas, including infrastructure development and security, to realize a "Free and Open Indo-Pacific (*Ziyou kaifang de Indu–Taipingyang*, 自由開放的印度–太平洋)" (Ministry of Foreign Affairs, 2022).⁴¹ At a regular press conference on February 11,

³⁹ "China, Russia reaffirm support on core interest, oppose interference in internal affairs: Joint statement," *People's Daily Online*, February 5, 2022, <<http://en.people.cn/n3/2022/0205/c90000-9953007.html>>.

⁴⁰ "Russia, Belarus kick off Union Resolve 2022 joint military drills," *Tass*, February 10, 2022, <<https://tass.com/defense/1400757>>.

⁴¹ "The Fourth Japan-Australia-India-U.S. (Quad) Foreign Minister's Meeting," *Ministry of Foreign Affairs of Japan (MOFA)*, February 11, 2022, <https://www.mofa.go.jp/fp/nsp/page6e_000274.html>.

China's Ministry of Foreign Affairs responded, saying, "The Quad group cobbled together is essentially a tool for containing and besieging China to maintain US hegemony. It aims to stoke confrontation and undermine international solidarity and cooperation."⁴²

Some media pointed out the disorganization of the Quad meeting, where opinions were exchanged on Ukraine, but no criticism of Russia was expressed. However, the difficulty in seeking approval from India, which has traditionally had friendly relations with Russia, was probably factored in the participating countries. Rather, the fact that the meeting was held at a time when the situation in Ukraine was tense and it was not possible to dare issue a statement of condemnation is proof that Quad is a framework aimed at China, as indicated further by the fact that China strongly opposed the meeting, and that the group intended to target China to prevent it from invading Taiwan in conjunction with Russia's invasion of Ukraine.

⁴² "Foreign Ministry spokesperson Zhao Lijian's regular press conference on February 11, 2022," *Ministry of Foreign Affairs of the People's Republic of China*, February 11, 2022, <https://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2511_665403/202202/t20220211_10641714.html>.

As the diplomatic battle unfolded between Europe and Asia, the situation in Ukraine became tense when the Russian Lower House of Parliament passed a resolution on February 15, calling on the president to recognize the independence of the Donetsk and Lugansk regions in eastern Ukraine, which are effectively controlled by pro-Russian forces.⁴³ On February 21, the day after the Olympic Games closed, Putin signed a presidential decree recognizing the independence of the “Donetsk People’s Republic” and the “Lugansk People’s Republic,” and ordered the dispatch of Russian forces to “perform peacekeeping functions” in eastern Ukraine’s breakaway regions.⁴⁴ In response, Blinken denounced at a press conference that the Russian recognition of independence was the beginning of an invasion.⁴⁵

⁴³ Anton Zverev and Tom Balmforth, “Russia’s parliament asks Putin to recognise breakaway east Ukrainian regions,” *Reuters*, February 16, 2022, <<https://www.reuters.com/world/europe/russias-parliament-asks-putin-recognise-breakaway-east-ukrainian-regions-2022-02-15/>>.

⁴⁴ “Putin orders Russian forces to ‘perform peacekeeping functions’ in eastern Ukraine’s breakaway regions,” *Reuters*, February 22, 2022, <<https://www.reuters.com/world/europe/putin-orders-russian-peacekeepers-eastern-ukraines-two-breakaway-regions-2022-02-21/>>.

⁴⁵ Antony J. Blinken, “Remarks: Secretary Antony J. Blinken and Ukrainian Foreign Minister Dmytro Kuleba at a Joint Press Availability,” *U.S. Department of State*, February 22, 2021, <<https://www.state.gov/secretary-antony-j-blinken-and-ukrainian-foreign-minister-dmytro-kuleba-at-a-joint-press-availability-2/>>.

Thus, on February 24, Putin stated that in line with Article 51 of Chapter VII of the UN Charter, with the authorization of the Russian Federation Council and pursuant to the treaties on friendship and mutual assistance with the Donetsk People's Republic and the Lugansk People's Republic, he had adopted a decision to conduct a special military operation, and the Russian invasion of Ukraine began.⁴⁶

The day after the invasion began, President Tsai Ing-wen of Taiwan emphasized that the situation in Ukraine was fundamentally different from that in the Taiwan Strait and called on people not to be misled by false information that would fuel their fears.⁴⁷ Meanwhile, China's State Councilor and Foreign Minister Wang Yi stressed that the Taiwan question differed in nature from the Ukraine issue; the two were not comparable at all, and the Taiwan question was entirely a matter of China's internal affairs, whereas the Ukraine issue arose from contention

⁴⁶ "Putin Announces Special Military Operation over Situation in Donbas," *Interfax*, February 24, 2022, <<https://interfax.com/newsroom/top-stories/73954/>>.

⁴⁷ "President Tsai responds to Russia's invasion of Ukraine, attends groundbreaking of expanded shipbuilding facility [News release]," *Office of the President, Republic of China (Taiwan)*, February 25, 2022. <<https://english.president.gov.tw/NEWS/6235>>.

between Russia and Ukraine.⁴⁸ The Chinese and Taiwanese governments, which have been confronting each other across the Taiwan Strait for more than 70 years, have both dismissed the idea of equating Ukraine and Taiwan. However, China has not ruled out the possibility of using military force against Taiwan; therefore, the suspicion of “today Russia, tomorrow China” persists. Will Taiwan be invaded by China in the future, just as Ukraine was invaded by Russia?

III. Similarities: Is Ukraine–Russia similar to Taiwan–China?

International Political Reality and Asymmetric Power

It is no exaggeration to say that just as the Soviet Union served as an axis of opposition to the United States during the Cold War, Russia, which succeeded the Soviet Union, and China, which continued to increase its military power against the background of economic growth, are the next most powerful great powers in international politics today. Those who saw the

⁴⁸ “Taiwan question differs in nature from Ukraine issue: Chinese FM,” *Xinhua*, March 7, 2022, <<https://english.news.cn/20220307/ed177aa55a7e4fa4a51b5ebb753b5998/c.html>>.

brunt of Russian power aimed at Ukraine associate it with Chinese power aimed at Taiwan.

What the relationship between Russia and Ukraine, and that between China and Taiwan, have in common is that the power involved is asymmetrical. Carr explained that political power in the international arena can be divided into three categories: military power, economic power, and power to control opinions, which are closely intertwined to form power.⁴⁹ In this section, we will refer to Carr's description and analyze the relationship between the two, focusing on economic and military power, which can be quantified and compared among them.

First, China boasts of the world's second-largest nominal GDP, approximately \$16.9 trillion in 2021, whereas Taiwan's is the 21st largest at roughly \$800 billion, less than one-twentieth. Russia's GDP is about one-tenth of China's, but it is the 11th largest, reaching about \$1.7 trillion, whereas that of Ukraine is the 56th at approximately \$180 billion, about one-tenth the size of Russia.⁵⁰ Both China and Russia are far ahead of the other

⁴⁹ Carr, *op.cit.* pp. 204-215.

⁵⁰ International Monetary Fund (IMF), *World Economic Outlook*, (Washington, D.C.: IMF, 2021), <
<https://www.imf.org/en/Publications/WEO/Issues/2021/10/12/world-economic-outlook-october-2021>>.

two in terms of economic size. Moreover, in terms of defense spending, China boasts the second-largest defense spending of approximately \$250 billion in 2020, whereas Taiwan is in 21st place with roughly \$10 billion, approximately 1/25th of China's, a significant gap. Ukraine ranks 34th with about \$6 billion, about one-tenth of Russia's \$60 billion, which ranks fourth.⁵¹ Of course, even in terms of total active military strength estimated for the end of 2022, China boasts of the world's first place with roughly two million troops, and Taiwan is in 31st place with 170,000, less than one-tenth. Ukraine is in 23rd place with approximately 200,000, less than a quarter, compared with Russia in 5th place with approximately 830,000.⁵² Although it is difficult to call Ukraine and Taiwan minor powers because of their economic scale and military power, there is a clear difference in their power compared to Russia and China, which are recognized by themselves and others as "great powers."

Thus, when there is power asymmetry in bilateral relations, especially when one power is militarily superior, the great power

⁵¹ Stockholm International Peace Research Institute (SIPRI), *Yearbook: Armaments, Disarmament and International Security* (New York: Oxford University Press, 2021).

⁵² Global Firepower, "2023 Military Strength Ranking," <<https://www.globalfirepower.com/countries-listing.php>>, accessed on November 20, 2023.

attempts to bend a minor power to its will without actually using military force by threatening the use of military force against the minor power. When this compellence fails, war or an asymmetric war occurs between great and minor powers.⁵³ One of the factors contributing to the failure of this compliance is the power of the minor power. It is said that strength of will determines the outcome of war, and that if the minor power has enough strength of will to counteract power asymmetries, the great power's dominance in the choice of war can be broken, and asymmetric compellence can fail.⁵⁴ Once an asymmetric war breaks out, the battlefield is often the land of the minor power. This means that for the minor power, it will be a battle for survival, whereas for the great power, defeat will not be a threat. There are also disagreements within the great power over the legitimacy of war and the excess casualties, creating asymmetry

⁵³ Thomas C. Schelling, *Arms and Influence*, New Haven: Yale University Press, 1966, pp. 69-91.

⁵⁴ Tomoyuki Matsuoka (松岡智之), "Chikara no Hitaishousei no Gyakusetsu: Kyoyo niokeru Kashin to Rakkan [力の非対称性の逆説—強要における過信と樂觀—, The paradox of power asymmetry: Overconfidence and optimism in compellence]," *Kokusai Seiji [International Relations]*, Vol. 184, March 2016, pp. 117–131.

as opposed to power in terms of willpower.⁵⁵ In other words, in the relationship where power is asymmetrical, the great power increases compellence, against its will, to the strengthening of the will of the minor power, and then has to use military force to make the minor power obey its will.

If Ukraine had yielded to Russian compellence, Russia would not have used military force. However, in the face of Russia's overwhelming power, Ukraine turned hard against Russia. Therefore, Russia decided to invade it and bend it to its will. Even if the fact that Russia is increasing its military pressure on Ukraine after the summer of 2021 is obvious, many experts have optimistically stated that just as common sense would suggest that Russia was unlikely to invade Ukraine, it would also indicate that there is no high probability of China invading Taiwan in the future. However, Russia's invasion of Ukraine has taught us to not be extremely optimistic. If China witnesses Taiwan's will and decides that it cannot be subdued by compellence, then it may actually use military force to achieve its goals.

⁵⁵ Andrew Mack, "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict," *World Politics* 27(2), January 1975, pp.177-188.

Pressure From Digital Authoritarian Powers

When Russia began its invasion of Ukraine, not only in Taiwan, but also in the international community, the image of Putin, who had been in power for more than 20 years with the goal of rebuilding a “Strong Russia,” was superimposed on that of Xi Jinping, who is trying to stay in power with the slogan “China’s Dream,” and there was widespread concern that Xi Jinping would launch an invasion of Taiwan in the future.

Putin became president in 2000 and served for four years as prime minister because of the two consecutive terms limit, returned to the presidency in 2012, and a constitutional amendment in 2020 allowed him to remain president until 2036. Meanwhile, Xi Jinping, who became president in 2013, could become president for life after the 2018 National Congress of the CCP abolished the constitutional provision, limiting the term of state presidents to two terms of 10 years. The West and other countries that could elect a government through democratic procedures were concerned that the prolonged power of the Chinese and Russian regimes, which have a large voice in the international community as permanent members of the UN Security Council, and the concentration of power in the hands of

individuals, would cause Putin and Xi Jinping to use any means possible to maintain their regimes.

According to the Democracy Index, a survey of 167 countries and regions around the world by the Economist Intelligence Unit, the research arm of the British magazine *The Economist*, Russia, and China, where power is increasingly concentrated in the hands of individuals, are classified as “authoritarian regimes” in 2021, ranking 124th and 148th, respectively.⁵⁶ Meanwhile, Taiwan is ranked 8th and classified as a full democracy, whereas Ukraine is ranked 86th and classified as a hybrid regime, a system that combines the characteristics of dictatorship and democracy, partly because of the power struggle between pro-Russian and pro-Western factions since the Orange Revolution of 2004. Although Ukraine and Taiwan are far apart in terms of their levels of democracy, they share similarities in the process of transitioning from authoritarian to democratic regimes, and in the pressure from autocratic states to change the status quo through force.

⁵⁶ Economist Intelligence Unit (EIU), *Democracy Index 2021: The China challenge* (London: EIU, February 2022), <<https://www.eiu.com/n/campaigns/democracy-index-2021/>>.

In recent years, China and Russia have increased their digital authoritarianism and use of digital technology to monitor and control their societies and citizens. They have not only manipulated domestic online public opinion to maintain their autocratic political regimes, but have also intervened in elections in other countries through the use of cyberspace.⁵⁷ Indeed, the May 2014 presidential election in Ukraine and the November 2018 local elections in Taiwan attracted attention as elections in which foreign governments were confirmed to have intervened through cyberspace, illustrating how the rise of digital authoritarian powers poses a major threat to democracies and democratization-oriented states.⁵⁸

During the Crimean Crisis in March 2014, Russia used hybrid warfare, a synthesis of the military as well as economic

⁵⁷ Nicholas Wright, "How Artificial Intelligence Will Reshape the Global Order: The Coming Competition between Digital Authoritarianism and Liberal Democracy," *Foreign Affairs*, July 2018, <<https://www.foreignaffairs.com/articles/world/2018-07-10/how-artificial-intelligence-will-reshape-global-order>>.

⁵⁸ Takahisa Kawaguchi (川口貴久) and Motohiro Tsuchiya (土屋大洋), "Dejitaru jidai no senkyo kainyū to seiji hushin: roshia niyoru 2016 nen Beidaitōryō senkyo kainyū wo rei ni [デジタル時代の選挙介入と政治不信—ロシアによる 2016 年米大統領選挙介入を例に一, Election interference in the digital age and political distrust: Russian interference in the 2016 United States presidential election]," *Kokyo Seisaku Kenkyu [Journal of Public Policy Studies]* Vol.19, December 2019, pp. 40-48.

and cultural means to forcibly incorporate the Crimean Peninsula in southern Ukraine into Russia in an almost bloodless manner. China, having seen Russia employ hybrid warfare, recognizes its usefulness and has already begun to move toward military construction with intelligent warfare (*zinenghua zhanzheng*, 智能化戰爭) that utilizes artificial intelligence and other advanced technologies (Jing and Igarashi, 2022).⁵⁹ Therefore, the people of Taiwan must prepare for “tomorrow Taiwan” by watching the actions of Russia, a digital authoritarian state on par with China, toward Ukraine.

IV. Differences: Are the Ukraine and Taiwan Issues Similar but Different?

Ukraine Surrounded by Plains and Taiwan by Sea

The people of Taiwan, who had been optimistic that Russia would never invade Ukraine, could no longer regard the incident

⁵⁹ Yuanchou Jing (荊元宙) and Takayuki Igarashi (五十嵐隆幸) “Chūgoku ga Mezasu Interijentoka Sennsō: ‘A2/AD’ Sakusen wo Moderukēsu toshita AI katsuyō nitsuite no Kōsatsu [中国が目指すインテリジェント化戦争—“A2/AD”作戦をモデルケースとした AI 活用についての考察—, China’s vision for intelligentized warfare: Consideration of A2/AD operations using AI technology],” *Bōeigaku Kenkyū [Defense Studies]*, Vol. 66, March 2022, pp. 3–28.

in faraway Eastern Europe as a fire on the other side of the river when they came to know that Russia had launched an invasion on 24 February. The day after the invasion began, Chiu Tai-san (邱太三), Minister of the Mainland Affairs Council of the Executive Yuan, attempted to dispel people's fears that China might move to invade Taiwan by responding in an interview from the Taiwanese media, "There is a concern about 'today Ukraine, tomorrow Taiwan,' and I disagree with this."⁶⁰ In addition, he pointed out four major conditions that differed across Taiwan and Ukraine: geopolitical strategic position, geographical situation, economic importance, and relations with the United States.

Chiu further said, "Taiwan is a part of the democratic alliance in the Indo-Pacific region and is located at the center of the first island chain. If Taiwan was lost, the situation in the South China Sea, not to mention the Taiwan Strait, would be affected," emphasizing the difference with Ukraine, which is not

⁶⁰ "É Wū chōngtū kàn Táihǎi Qiū Tàisān: Chíxù guānzhù Zhōngfāng rènzhī zùozhàn [俄烏衝突看台海 邱太三：持續關注中方認知作戰, Russia-Ukraine conflict looks at the Taiwan Strait]," *Central News Agency*, February 25, 2022, <<https://www.cna.com.tw/news/acn/202202250345.aspx>>.

a member of NATO.⁶¹ Taiwan is located at the nexus of Northeast and Southeast Asia, and is undoubtedly a strategic point that can hinder China's expansion into the Pacific. However, from Russia's perspective, Ukraine is a strategic point. Crimea, which it now effectively controls, and southeastern Ukraine, which has shifted the focus of the invasion since late March, are areas where it must ensure its dominance to advance from Russia into the Mediterranean Sea via the Black Sea. This is evident from the fact that even after the collapse of the Soviet Union, Russia continued to lease Sevastopol on the Crimean Peninsula as a base for its Black Sea Fleet. In light of these considerations, Chiu perhaps intended to calm the public using this explanation. However, lessons should be drawn from the commonalities in geopolitical strategies.

Meanwhile, as Chiu explained, there is a significant difference between Ukraine and Taiwan, and the two cannot be compared in geographical terms. More than half of Ukraine's 4,600 km land border runs along Russia and Belarus, putting Ukraine in a disadvantageous situation, in which it could be attacked at once by forces deployed along the border, as was the

⁶¹ Ibid.

case this time. In this respect, the main island of Taiwan is more than 100 km away from the PRC, and its entire 900 km circumference is surrounded by the sea. Therefore, regardless of how powerful the Chinese land forces are, it is essential to enhance their naval power. In recent years, China has been building landing ships at a rapid pace to land a large force during the invasion of Taiwan, without relying on port facilities. Even if it were able to possess thousands of landing ships capable of transporting all its land forces, there are only about 14 beaches suitable for landing, and their areas are small, making simultaneous invasion nearly impossible. China is said to be in the process of renovating its civilian cargo ships so that they can be commandeered and used for operations. However, even if renovated, civilian cargo ships need to dock at ports to land troops, and these are limited to approximately 10 locations.⁶²

How many troops would be required to invade Taiwan? For reference, at the end of World War II, the Allied Forces planned to land on Kyushu, an island of approximately the same size as the main island of Taiwan and surrounded by the sea. In their

⁶² Ian Easton, "Hostile Harbor's: Taiwan's Ports and PLA Invasion Plans," *Project 2049 Institute*, July 22, 2021, <https://project2049.net/wp-content/uploads/2021/07/P2049_HostileHarbors_Easton_072221.pdf>.

“Olympic Plan,” the Allied Forces estimated that the maximum number of Japanese troops deployed in Kyushu would be 200,000. The forces required to take up the island were approximately 760,000, 30 aircraft carriers, and 900 landing ships.⁶³ Although the mode of warfare is different today, it is undoubtedly the decisive difference between Taiwan and Ukraine, a land that has been engulfed in warfare many times since the beginning of history, that Taiwan’s defense against China, which boasts 10 times the military strength of Taiwan, is supplemented by the natural barrier of the sea.

Non-substitutability in the Global Economy

Chiu further stated that Taiwan is the international supply center for semiconductors, and its economic importance differs greatly from that of Ukraine, which depends primarily on agricultural products and energy resources such as natural gas. If Taiwan’s wafers are no longer available, the global economy will experience a major blow. Indeed, as of December 2019,

⁶³ General Headquarters, United States Army Forces in the Pacific, “Downfall--strategic plan for operations in the Japanese Archipelago,” May 28, 1945, World War II Operational Documents, N12307-A, *Combined Arms Research Library Digital Library*, <<https://cgsc.contentdm.oclc.org/digital/collection/p4013coll8/id/3387/rec/1>>.

Taiwan led the world in semiconductor production capacity; although it gave up that position to South Korea in December 2021, it still holds second place in the world with approximately 21% of global production capacity.⁶⁴ In particular, 92% of the manufacturing facilities for advanced semiconductors below 10 nm (one billionth of a meter) are located in Taiwan.⁶⁵ Among them, Taiwan's TSMC is the only company in the world that can stably manufacture 5-nanometer semiconductors, and the U.S. government is considering attracting TSMC's plant and making it a more advanced facility capable of manufacturing 3-nanometer chips, aiming to secure strategic technologies directly

⁶⁴ IC Insights, "Taiwan Edges South Korea as Largest Base for IC Wafer Capacity," June 24, 2020, <<https://www.icinsights.com/news/bulletins/Taiwan-Edges-South-Korea-As-Largest-Base-For-IC-Wafer-Capacity/>>; Knometa Research, "China's share of global wafer capacity continues to climb," October 2, 2022, <<https://knometaresearch.com/news/?post=china-039-s-share-of-global-wafer-capacity-continues-to-climb>>.

⁶⁵ Antonio Varas, Raj Varadarajan, Jimmy Goodrich and Falan Yinug, *Strengthening the Global Semiconductor Supply Chain in An Uncertain Era*, Boston Consulting Group (BCG) and Semiconductor Industry Association (SIA), April 2021, <https://www.semiconductors.org/wp-content/uploads/2021/05/BCG-x-SIA-Strengthening-the-Global-Semiconductor-Value-Chain-April-2021_1.pdf>.

related to security and critical infrastructure that support the digital society.⁶⁶

Meanwhile, before Russia's invasion, Ukraine was known as one of the world's top 10 exporters of grain and steel.⁶⁷ However, unlike the established system of purchasing through giant grain and resource companies, semiconductors, which are highly non-substitutable, are being enclosed. As the global demand for semiconductors continues to increase, Taiwan, which boasts some of the world's most advanced technology, is about to be integrated into the global semiconductor supply chain, with the U.S. at its core.

It is no exaggeration to say that Taiwan is of greater economic importance than Ukraine as Taiwan is the center of the world economy in semiconductor manufacturing. However, overwhelming volumes are an important factor that cannot be overlooked in the global economy. During the invasion of Ukraine by Russia, countries that depended on Russian energy resources were unable to impose severe economic sanctions,

⁶⁶ Stephen Nellis, "Exclusive TSMC Looks to Double Down on U.S. Chip Factories as Talks in Europe Falter," *Reuters*, Mar 14, 2021, <<https://www.reuters.com/technology/exclusive-tsmc-looks-double-down-us-chip-factories-talks-europe-falter-2021-05-14/>>.

⁶⁷ IMF, *World Economic Outlook (October 2021)*.

even though they recognized that restricting their imports would have given a major blow to the Russian economy.⁶⁸ In other words, the “volume” of Russian energy resource exports occupies an important position in the global economy and cannot be easily replaced. Similarly, China's influence on the global economy, which boasts the world's second-largest GDP, is so great that countries are unlikely to take steps to impose economic sanctions that could override China's will. This is despite the fact that it is not difficult to imagine that if China invades Taiwan, it will be condemned by the international community in the same manner as Russia.

Therefore, Taiwan, which is always at risk of being isolated in the international community, must not only improve its technology and increase its non-substitutability against other countries to protect itself from China, which has the potential to overcome Taiwan's non-substitutability with overwhelming volume, but must also acquire “strategic indispensability,” a position of difficult substitution in an area that is critically important in the eyes of countries like the U.S. Taiwan must

⁶⁸ Ciara Nugent, “Why sanctions on Russia aren't targeting oil and gas,” *TIME*, February 25, 2022, <<https://time.com/6151493/russia-oil-gas-embargo-sanctions-ukraine/>>.

increase its technological non-substitutability and, at the same time, become strategically indispensable enough to make the U.S. and other countries willing to impose economic sanctions on China.⁶⁹ If Taiwan is unable to do so, it would have created an environment in which the international community could tolerate a Chinese invasion of Taiwan.

Thus, the options available to Taiwan are more flexible than those available to Ukraine. Unlike the production of grains and steel, which depend on resources and land, semiconductors, which depend on technological capabilities, can be easily produced by establishing bases outside Taiwan. Taiwan will retain its intellectual property rights and build factories and other bases in countries that intend to “enclose” Taiwanese technology and create local employment. Retaining intellectual property rights is important for Taiwan to ensure that those countries do not just take Taiwanese technology. The creation of an employment relationship will create greater economic ties and

⁶⁹ PHP Geo-Technology Strategy Study Group, “Hai-tech haken kyoso jidai no Nippon no shinro [ハイテク覇権競争時代の日本の針路—「戦略的不可欠性」を確保し、自由で開かれた一流国を目指す—, Japan’s course in the era of competition for high-tech hegemony: Securing strategic indispensability and becoming a free and open leading country],” *PHP Research Institute*, April 2020, <<https://thinktank.php.co.jp/policy/6092/>>.

familiarize Taiwan with its citizens, thus improving public sentiment towards Taiwan. In other words, by deepening relations with countries where production and other activities are based, Taiwan can share the risks that it incurs when its sovereignty is threatened. Of course, Taiwan will benefit greatly if it can strategically follow the major restructuring of the global supply chain in areas other than semiconductors and, at the same time, take advantage of the enclosure intentions while remaining in the lead.

For Taiwan, which cannot benefit from collective security, achieving “strategic indispensability” will be the key to survival in a difficult international environment.

The Existence of an Alliance under the UN's Dysfunction of Collective Security

As Russia began its invasion of Ukraine, there were concerns that a conflict in Taiwan, which was not a member of the UN, would create more serious problems. However, Russia's invasion of Ukraine exposed UN dysfunction to the members of the UN. The Security Council held more than 10 emergency

meetings on the situation in Ukraine between the end of January and late March 2022, and draft resolutions condemned by the U.S. and others continued to be rejected due to Russia's veto power.⁷⁰ At the request of the Security Council, an emergency special session was held for three days from February 28 for the first time in 40 years, and a resolution calling for Russia's immediate withdrawal was adopted, with 141 countries in favor, five against, and 35 abstentions.⁷¹ However, unlike the Security Council resolutions, the General Assembly's resolutions were not legally binding, and therefore the country was helpless in the face of the Russian invasion.

The collective security of the UN, in which the security of a nation does not depend on its military expansion or military alliances with other nations, was a basic principle for maintaining world peace as stipulated in the UN Charter but was dysfunctional because the permanent members of the Security Council had veto power. During the Crimean crisis in March

⁷⁰ Ashley Semler, "Why isn't the UN doing more to stop what's happening in Ukraine?" *CNN*, April 15, 2022, <<https://edition.cnn.com/2022/04/15/politics/united-nations-ukraine-russia/index.html>>.

⁷¹ "General Assembly Resolution Demands End to Russian Offensive in Ukraine," *United Nation News*, March 2, 2022, <<https://news.un.org/en/story/2022/03/1113152>>.

2014, a Security Council resolution was vetoed by Russia, and the General Assembly resolution, which had almost the same purpose, was adopted,⁷² but it failed to stop Russia's de facto "annexation" of Crimea. Ukraine, which became independent following the collapse of the Soviet Union in 1991, has long followed a policy of non-alignment, but after the Crimean crisis, Ukraine repealed the law that stipulated it and clarified its policy of joining NATO.⁷³ By joining NATO, Ukraine sought to defend its own national interests or jointly with other member states in the event of an armed attack from Russia, based on the right to collective self-defense granted under Article 51 of the UN Charter. However, Putin, who had long opposed NATO's eastward expansion, was alarmed that Ukraine's membership in NATO would dramatically increase the threat to Russia's

⁷² United Nation News, "Backing Ukraine's Territorial Integrity, UN Assembly Declares Crimea Referendum Invalid," March 27, 2014, <<https://news.un.org/en/story/2014/03/464812-backing-ukraines-territorial-integrity-un-assembly-declares-crimea-referendum>>.

⁷³ David Herszenhorn, "Ukraine Vote Takes Nation a Step Closer to NATO," *The New York Times*, December 23, 2014, <<https://www.nytimes.com/2014/12/24/world/europe/ukraine-parliament-nato-vote.html>>.

security.⁷⁴ This is why he decided to invade Ukraine under the Zelensky administration, which pushed for NATO membership.

The diplomatic vulnerability of not having a military alliance with any country places Taiwan in the same position as Ukraine. However, Taiwan has received support, albeit unilateral and ambiguous, such as an alliance concerning Taiwan's defense under the Taiwan Relations Act (*Taiwan guanxi fa*, 臺灣關係法), which was enacted by the U.S. as a domestic law after the breaking of relations between the two in 1979. This proved useful during the Third Taiwan Strait Crisis in 1995–1996 when the U.S. dispatched an aircraft carrier battle group to suppress China's compellence against Lee Teng-hui (李登輝)'s visit to the U.S. and the first direct presidential election in Taiwan.⁷⁵

However, in late March, about a month after Russia's invasion of Ukraine began, a public opinion poll conducted by the Taiwan Public Opinion Foundation (*Taiwan minyi jijinhui*, 臺灣民意基金會), a private Taiwanese think tank, asked, "Do

⁷⁴ "If Ukraine Joins NATO, Russia's Security Threats Will Increase Dramatically – Putin," *Tass*, February 21, 2022, <<https://tass.com/politics/1407343>>.

⁷⁵ Robert S. Ross, "The 1995-96 Taiwan Strait confrontation: Coercion, credibility, and the use of force," *International Security*, Vol. 25, No. 2, Fall 2000, pp. 87–123.

you think the U.S. military will enter the war to help Taiwan defend itself?” The percentage of respondents who said they “think the U.S. military will do” so plummeted from 65% in October to 34.5%, while those who said they “don’t think” so jumped from 28.5% to 55.9%.⁷⁶ In early March, the Biden administration dispatched the former head of the U.S. uniformed services and others to Taiwan to “reassure Taiwan” and send a message to President Tsai Ing-wen (蔡英文) and others that “the United States values the security of the Western Pacific region and the Taiwan Strait,” but it did not have the effect expected by the U.S. government.⁷⁷

In recent years, there has been a debate in the U.S. about whether the U.S. should rethink its “strategic ambiguity” toward

⁷⁶ Taiwanese Public Opinion Foundation, “É Wū Chōngtū, Liǎngàn Wéijī yǔ Táiwān Mínhǔ” [俄烏衝突、兩岸危機與台灣民主, Russia-Ukraine conflict, cross-strait crisis and democracy in Taiwan], Táiwān Mínì Jījìn-huì [財團法人台灣民意基金會, Taiwanese Public Opinion Foundation], March 2022, <<https://www.tpof.org/圖表分析/俄烏衝突、兩岸危機與台灣民主（2022年3月22日）/%20March%202022,%202022>>.

⁷⁷ Koji Sonoda (園田耕司), “Bei Daihyoudan no Hōtai, Roshia Shinkōtyokugo ni Dashin ‘Ajia Kakkoku ni Anshin wo Kyōyo, [米代表団の訪台、ロシア侵攻直後に打診「アジア各国に安心を供与」、Approaching the U.S. delegation to visit Taiwan immediately after the invasion by Russia: ‘Providing reassurance to Asian countries’],” *Asahi Shimbun Digital*, March 23, 2022, <<https://www.asahi.com/articles/ASQ3R4SFSQ3RUHBI00D.html>>.

Taiwan and clarify its security commitment to the island.⁷⁸ However, it is difficult to achieve this transition. What Taiwan can do now is increase its strategic value in the aforementioned semiconductors and other areas, and convince the U.S. that it must protect Taiwan.

V. Conclusions

Even after Russia's invasion of Ukraine, there has been constant speculation that China will take advantage of this opportunity to invade Taiwan. While China, for its part, has demonstrated a unified stance against Western nations by conducting military exercises and joint patrols in the Far East with Russia, China has consistently emphasized that it wants to "play a positive role in the international community," and has continued to adopt an "ambiguous attitude." For China, which advocates unity of territory and sovereignty, Russia's unilateral recognition of the independence of Ukrainian territory is unacceptable. This is because if Russia's claim were recognized, the Chinese government would not be able to oppose the

⁷⁸ Richard Haass and David Sacks, "American Support for Taiwan Must Be Unambiguous: To Keep the Peace, Make Clear to China That Force Won't Stand," *Foreign Affairs*, September 2020, <<https://www.foreignaffairs.com/articles/united-states/american-support-taiwanmust-be-unambiguous>>.

Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion
of Taiwan

independence of Xinjiang, Tibet, Hong Kong, Taiwan, etc., in the case that the West was to recognize them.

The problem in Ukraine is ongoing, and China seems to be in the process of drawing lessons from Russia's invasion of Ukraine, as a case study of its armed invasion of Taiwan. Although many in the media have discussed the view that Xi Jinping would force the unification of Taiwan, he must have already realized that the invasion of Taiwan would be difficult. Then, we will now proceed to discuss how the consequences of Russia's invasion of Ukraine will affect a Chinese invasion of Taiwan, based on the three hypotheses.

If Russia wins in Ukraine, will China be encouraged to invade Taiwan? The answer is Yes. China will analyze the results of Russia's short-term success in Crimea and its prolonged result in Ukraine, and will continue to build up its military capabilities and prepare operations to achieve success in the short term. China will strengthen its ties with Russia, and Russia will play a role in containing the West when China invades Taiwan. On the other hand, the defeat of Ukraine would also promote U.S. support for Taiwan's defense, because allowing China to invade Taiwan would undermine U.S.

credibility as the leader of democratic nations as the number of democracies has been declining since the 2000s. Especially, Taiwan is rated first in Asia in the Democracy Index 2022 by the Economist Intelligence Unit.⁷⁹

So, if Russia loses in Ukraine, will China be discouraged from invading Taiwan? In the short term, the answer is Yes; in the long term, No. China will thoroughly analyze the causes of Russia's defeat and make all possible preparations. China has learned from the lessons of the collapse of the Soviet Union and has strengthened its communist dictatorship to become a “great power.” China is adept at learning from the mistakes of Russia.

Furthermore, if Russia loses, Xi Jinping will be disappointed, but it will also be an opportunity for China. It is because Russia will truly lose its former “great power” authority. China will gain the support of countries that are not comfortable with the Western-led international order and expand its international influence. Even if U.S. support for Taiwan’s defense goes forward, China’s becoming a true “superpower” on

⁷⁹ Economist Intelligence Unit (EIU), *Democracy Index 2022: frontline democracy and the battle for Ukraine*, London: EIU, February 2023, <<https://www.eiu.com/n/campaigns/democracy-index-2022/>>.

par with the U.S. will foster international public opinion in favor of Taiwan's unification.

For the CCP, “unification with Taiwan” is a goal it must achieve; however, it is not an absolute requirement to retain the legitimacy of governance. Rather, from the standpoint of legitimacy of governance, it is one of the necessary conditions. On the contrary, it is a goal like a “double-edged sword” that carries the risk of losing the legitimacy of governance by failing. Even if Xi Jinping wants to leave “unification with Taiwan” as his legacy in the history of the People's Republic of China, it would be a stain on history if, like Russia and Ukraine, the country becomes a battleground, suffering economic damage from a prolonged war, and failing to achieve “Taiwan unification.” Hence, China will focus on realizing its ultimate goal of “winning without fighting.”⁸⁰ China will build a powerful military force and at the same time increase military

⁸⁰ Yuanchou Jing (荊元宙) and Takayuki Igarashi (五十嵐隆幸) “Chūgoku ga Mezasu Hisesshokugata ‘Jōhōka Sensō’: Butsuri Ryōiki, Saiba Ryōiki, Ninchi Ryōiki wo Ōdan shita ‘Tatakawazushite Katsu Tatakai’ [中国が目指す非接触型「情報化戦争」—物理領域・サイバー領域・認知領域を横断した「戦わずして勝つ戦い」—, China's Blueprint for Non-Contact Information Warfare: “Winning Without Fighting” across Physical, Cyber, and Cognitive domains],” *Anzenhoshō Senryaku Kenkyū [Security & Strategy]*, Vol. 4, No. 1, December 2023, pp. 21–41.

pressure on Taiwan. In addition, by expanding its activities in the cyber domain, it will manipulate public opinion to make the Taiwanese side believe that the U.S. will not come to aid in an emergency. These activities will work on the cognitive domain so that the Taiwanese people will give up the idea that they can win if they fight.

Russia's invasion of Ukraine has raised the international community's interest in trends across the Taiwan Strait, making it more difficult for China to use military force against Taiwan, given its costs and risks. However, it is forbidden to be optimistic. Although "common sense suggests that China is not likely to invade Taiwan," the possibility that Xi Jinping, now in power, will take actions that do not seem rational, cannot be ruled out. Although this article presents Taiwan's geographic environment, its position in the global economy, and its relationship with the United States as advantages, they are tantamount to weaknesses. The fact that Taiwan is surrounded by the sea is an obstacle to supply to Taiwan and also an obstacle to the evacuation of the average citizens. Maintaining a technological superiority, such as in semiconductors, is also not easy. While it is important to establish a system that can

Today Ukraine, Tomorrow Taiwan? Analysis of China's Possible Invasion of Taiwan

independently defend Taiwan, what is most important for Taiwan is the trust of the international community and to increase the number of countries that support Taiwan and oppose a Chinese invasion of Taiwan, even if they do not have diplomatic relations with Taiwan. It is also important for Taiwan to build a relationship with them that allows for regular consultations so that, in a Chinese invasion of Taiwan, they can guarantee not only military support but also humanitarian assistance, such as the evacuation of civilians. Will “today Ukraine, tomorrow Taiwan” come true? We must respond immediately to the rapidly changing international situation and rally humanity's wisdom to prevent a repetition of tragic history.

US-China Great Power Competition and the PLA Military Modernization:
Evaluation of Japan's Defense Policy and Its Impact

US-China Great Power Competition and the PLA Military Modernization: Evaluation of Japan's Defense Policy and Its Impact

Susumu Takai (高井 晋)¹

(President of the Security Strategy Research Institute of Japan)

Abstract

Japan's defense policy was long confined to the United Nations activities and the Japan-U.S. Security Treaty, in connection with constitutional provisions imposed by the Allied forces after World War II. The modernization of China's military power along with its economic growth, its confrontation with the United States, and the strengthening of Sino-Russian

¹ LL.M. Susumu TAKAI is the President of Security Strategy Institute of Japan, SSRI. He started his carrier as a research fellow on international law at the National Institute for Defense Studies, NIDS. He engaged his research on international law of the sea, international law of air and space and the U.N. Peacekeeping issue. He is presently Emeritus President of the Japan Society of Defense law, and editor in chief of the SPF Journal of Island Studies of the Sasakawa Peace Foundation and member of the 3rd Advisory Panel on Communications Concerning Territorial Integrity. He focuses his research work on legal aspects of defense studies and security environment issues in the East China Sea.

relations after the war in Ukraine dramatically changed Japan's defense policy. Japan decided to maintain counterstrike capabilities and, in cooperation with the U.S. and like-minded countries, pursued a realistic defense policy to counter forces that unilaterally change the status quo by force.

Keywords: Article 9 of the Constitution of Japan, Japan's Self-Defense Forces, Japan-U.S. Security Treaty, National Security Strategy of Japan, Stand-off Defense Capability

Introduction

After losing World War II, Japan accepted the surrender terms of the Potsdam Declaration on August 14 of 1945 and accepted the occupation policy of the Allied forces.² After the war, the Allied forces forced Japan to adopt a new constitution that renounced war potential and the right to belligerence. In other words, Article 9 of the Constitution stipulates that Japan does not possess land, navy, or air force, and has renounced the right to belligerency.³ Japan's defense policy, bound by the provisions of Article 9 of the Constitution, had no choice but to adopt a security policy based on the collective security of the

² Clause 7 of the Potsdam Declaration, which set out the conditions for Japan's surrender, states, 'Until such a new order is established and until there is convincing proof that Japan's war-making power is destroyed, points in Japanese territory to be designated by the Allies shall be occupied to secure the achievement of the basic objectives we are here setting forth.', and Clause 9 states, 'The Japanese military forces, after being completely disarmed, shall be permitted to return to their homes with the opportunity to lead peaceful and productive lives.'

³ Article 9, Paragraph 1 of the Japanese Constitution stipulates 'Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes.' And Article 9, Paragraph 2 stipulates 'In order to accomplish the aim of the preceding paragraph, land, sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized.' (<https://www.japaneselawtranslation.go.jp/ja/laws/view/174/je>) (as of August 27, 2023).

United Nations and the security treaty with the United States for a long time.

On the other hand, China achieved reconciliation between the US and China through the 1992 US-China Joint Statement, advanced into the international community, strengthened its economic power, and strengthened the People's Liberation Army Navy. The Xi Jinping administration has promoted the 'One Belt, One Road' economic policy, and constructed a maritime network known as the Necklace of Pearls, and China expanded its influence into Europe. Afterwards, the United States has finally noticed that China's overseas expansion backed by its military power and Chinese values violated its vested interests, and the U.S. shifted from a policy of cooperation with China to a policy of confrontation. The third Xi Jinping administration, approved in the 2022 Communist Party Congress, has announced the unification of Taiwan by force, despite warnings from the United States.

Inspired by China's military modernization and Russia's military invasion of Ukraine, Japan has adopted a revised national security strategy to maintain a law-based international order and counter unilateral changes to the status quo by force.

Based on this, Japan decided to adopt a pragmatic defense policy that cooperates with allies and like-minded countries. This short article examines the influence of China's military modernization and the US-China conflict on Japan's defense policy and deals with the issue of stand-off defense capability as the centerpiece of new defense policy.

1 The Constitution of Japan and the Legal Status of the Self-Defense Forces

It should be noted that Japan's defense legislation is different from the defense policy legislations of other countries. After World War II, Article 9 of Japan's constitution places fatal restrictions on Japan's military capabilities and posture. In other words, Japan's Self-Defense Forces are not, under domestic law, military forces like those of other countries in the normal sense of the word. And they are positioned as administrative organs, even though they are armed forces responsible for the defense of Japan.

Therefore, although the Self-Defense Forces is an armed organization responsible for the defense of the country, it is positioned as an administrative agency, and its missions and

authority are subject to significant legal restrictions. This means the Self-Defense Forces are armed police forces. Therefore, Japan has neither military criminal law nor court martial. However, the Self-Defense Forces are treated as military forces under international law, but even when exercising the right of self-defense, they must commit exclusively to defense,⁴ and find themselves in a difficult position between legal requirements and military rationality.

Japan, as a sovereign state, has the right of collective self-defense under international law, but for a long time, the right has been interpreted as a right that cannot be exercised under the Constitution by the government. Even when the Self-Defense Forces engage in United Nations Peace-Keeping Operations, the use of force has been prohibited but the use of weapon has been allowed.

⁴ ‘Exclusive defense’ refers to the use of defensive power only when an armed attack is received from the enemy, and the mode of defense is kept to the minimum necessary for self-defense, and the defense force maintained is also the minimum necessary for self-defense. This refers to the stance of a passive defense strategy that is in accordance with the spirit of the Constitution and is the basic policy of Japan’s defense, *Reply to the question regarding the definition of exclusive defense*, (189th Diet Cabinet and House of Councilors Question No. 189, No. 79, March 24, 2015) (<https://www.sangiin.go.jp/japanese/joho1/kousei/syuisyo/189/touh/t189079.htm>) (as of August 27, 2023).

It means that Japan's defense legislation is a legal system like police law, and its provisions are based on a 'positive list' method that only stipulates 'what is possible'. In other words, all actions of the Self-Defense Forces must have a legal basis, and they cannot do anything that is not stipulated by domestic law. Considering the nature of national defense that the Self-Defense Forces are supposed to carry out, this poses a major obstacle to carrying out their missions.

There is currently a debate that Article 9 of the Constitution should be amended to make the Self-Defense Forces a military in the normal sense of the word, in line with the international situation. However, there are many obstacles to amending the constitution, and it has not been possible to amend it. Therefore, the basics of Japan's defense policy have not changed from the beginning, and the Self-Defense Forces remain an armed police force.

Japan's defense policy was therefore extremely limited, as seen in the Basic Policy on National Defense⁵ of 1957 and the

⁵ Paragraph 1 of the Basic Policy on National Defense stipulates 'Supporting the activities of the United Nations, promoting international collaboration, and thereby, making a commitment to the realization of world peace'. Paragraph 4 stipulates 'Dealing with external aggression based on the security

Japan-U.S. Security Treaty of 1960.⁶ However, as discussions grow about Japan's response to the unstable international peace after the end of the Cold War, Japan aims to create an international security environment rather than a defense policy based on the traditional 'one-country pacifism'.⁷ In other words, Japan decided to adopt a defense policy based on 'Proactive Contribution to Peace' until China's military power was modernized.⁸

2 China's Naval Power Buildup and Japan's Response

In 1992, China, a communist dictatorship, signed a joint statement between the United States and China, allowing it to

arrangements with the U.S. until the United Nations will be able to fulfill its function in stopping such aggression effectively in the future'.

⁶ Article 5 of the Japan-U.S. Security Treaty stipulates 'Each Party recognizes that an armed attack against either Party in the territories under the administration of Japan would be dangerous to its own peace and safety and declares that it would act to meet the common danger in accordance with its constitutional provisions and processes.' And article 6 stipulates 'For the purpose of contributing to the security of Japan and the maintenance of international peace and security in the Far East, the United States of America is granted the use by its land, air and naval forces of facilities and areas in Japan'.

⁷ One-country pacifism is the position of thinking that it is sufficient if only Japan is safe, without considering regional or international security.

⁸ Japan's Proactive Contribution to Peace is a policy position that proactively contributes to ensuring peace, based on the idea that it is necessary to ensure peace and stability in the region and the international community in order to protect Japan's peace and security.

advance into the international community. The United States supported China's development, believing that if China became economically prosperous, it would be able to share values with capitalist countries. China achieved rapid economic growth through Deng Xiaoping's economic opening reforms and focused on becoming a maritime power to realize China's dream of 'rejuvenation of the great Chinese nation'.

In 2010, China achieved rapid economic growth, surpassing Japan to become the world's second-largest country in terms of nominal gross domestic product. Reflecting this economic growth, China increased its defense spending and modernized its military. In other words, it modernized and strengthened its nuclear forces, missile forces, and sea and air forces. As China becomes more active in securing maritime rights and interests in the East China Sea and South China Sea, the international community has become increasingly wary of such actions by China.

In Japan, tensions continued as China claimed the Senkaku Islands as its core interests, and the defense of the Nansei Islands of Japan, including the Senkaku Islands, was actively debated against Chinese encroaching into the East China Sea. As a result,

in 2013, Japan's first national strategy, the National Security Strategy, was approved by the Cabinet, which clearly identified China as a maritime security threat. At this point, the target of Japan's threat was shifted from Russia to China.

Furthermore, Japan discussed what actions the Self-Defense Forces should take in the crisis that China militarily invaded Taiwan, and in 2021 enacted the Armed Attack Situation Act, which clarifies countermeasures for each type of Chinese military action. In other words, the situation was divided into an existential crisis situation,⁹ which would mean a military invasion of Taiwan by China, and an armed attack situation,¹⁰ which would mean a military invasion of Japan. Japan enacted the Peace and Security Legislation in 2015 to enable it to support the U.S. military activities with Taiwan in times of existential crisis. The Japanese government authorized the Self-Defense Forces to use force based on the right of collective self-defense.

⁹ An existential crisis situation is when an armed attack occurs against another country with which Japan has a close relationship, and there is a clear danger that this threatens the very existence of Japan and fundamentally overturns the people's rights to life, liberty, and the pursuit of happiness. refers to a situation (Article 2 of the law).

¹⁰ An armed attack situation refers to a situation in which an armed attack has occurred or a situation in which there is a clear and imminent danger of an armed attack (article 2 of the law).

Afterwards, China proposed the 'Strong Military Ideology'¹¹ that aims to create a 'world-class military', and further enshrined 'Xi Jinping's Strong Military Ideology' in the party constitution at the 19th Party Congress in 2017, and this ideology led to the establishment of the People's Liberation Army.

This position of President Xi Jinping was confirmed at the 100th Anniversary Celebration of the Communist Party of China held in July 2021 and at the 6th Plenary Session of the 19th Central Committee of the Communist Party of China held in November of the same year. It was once again emphasized 'Strong Military Ideology' as the 'core'.¹²

As will be discussed later, the reason behind the revision of Japan's National Security Strategy in 2022 was due to concerns

¹¹ Xi Jinping's strong military ideology explains how the Chinese Communist Party will promote a strong military to the critical stage of China's development from "great" to "strong" in the new era, and realize the Chinese dream and the dream of a strong military. (Eiichi Shinozawa, 'Xi Jinping's Thinking on Strengthening the Military and Reinforcement of Party Security'), *Asian Studies Series 104*" (Asia University, 2019), PP. 125-126.(<https://www.asia-.ac.jp/albums/abm.php?d=448&f=abm00001169.pdf&n=%E7%B9%A8%E8%BF%91%E5%B9%B3%E3%81%AE%E5%BC%B7%E8%BB%8D%E6%80%9D%E6%83%B3%E3%81%A8%E5%BC%B7%E5%8C%96%E3%81%95%E3%82%8C%E3%82%8B%E5%85%9A%E3%81%AE%E5%AE%89%E5%85%A8%E4%BF%9D%E9%9A%9C.pdf>) (as of August 30,2023)

¹² Ministry of Defense, *DEFENSE of JAPAN 2022*, pp.30-40.

that the ideology of strengthening military power would increase the possibility of China's invasion of the Nansei Islands of Japan.

3 Strategic Competition and Growing Mutual Distrust between the U.S. and China

As mentioned above, Japan's defense policy is to guarantee Japan's security through joint defense with the United States, and Japan also has three non-nuclear principles as its national policy,¹³ which is the principle that Japan will not possess nuclear weapons. Therefore, Japan, which is adjacent to the nuclear powers China, Russia and North Korea, had no choice but to rely on the US strategy and extended nuclear deterrence

¹³ The Diet resolutions regarding the three non-nuclear principles are as follows. (<https://www.mofa.go.jp/mofaj/gaiko/kaku/gensoku/ketsugi.html>)(as of August 31,2023).

‘The government will abide by the Three Non-Nuclear Principles of not owning, not creating, and not importing nuclear weapons, and will also ensure that, upon the return of Okinawa, there are no nuclear weapons in Okinawa, and that nuclear weapons will not be brought into Okinawa even after the return.’ (House of Representatives resolution on non-nuclear weapons and reduction of U.S. military bases in Okinawa (November 24, 1971)). And ‘Considering that the three non-nuclear principles of not having, not producing, and not introducing nuclear weapons have been established as national policy, the government will faithfully implement them under all circumstances.’ (After the vote on Treaty on the Non-Proliferation of Nuclear Weapons Resolutions adopted by the Committee on Foreign Affairs of the House of Representatives after the vote (April 27, 1976), and resolutions adopted by the Committee on Foreign Affairs of the House of Councilors after the vote on the Treaty on the Non-Proliferation of Nuclear Weapons (May 21, 1976). And ‘As the only country to have suffered from atomic bombings, Japan's national policy is to adhere to the three non-nuclear principles of not possessing, not producing, and not importing nuclear weapons. (Resolution of the House of Representatives Foreign Affairs Committee on Nuclear Disarmament (June 5, 1981).

US-China Great Power Competition and the PLA Military Modernization:
Evaluation of Japan's Defense Policy and Its Impact

policy for defense against nuclear attacks from neighboring countries.

The United States' strategy is to ①prevent hostile forces from dominating important regions such as Europe, the Far East, and the Middle East, ②form an economic order based on freedom of goods, finance and information, and ③achieve these goals. This should be realized through an international system. Such a US strategy was, of course, directly related to the security and prosperity of the United States.

On the other hand, China, which had significantly increased its national power, was developing a policy of asserting itself externally to the world, which could easily be expected to conflict with the grand strategy of the United States. In other words, for the United States, China's tough foreign stance was incompatible with the basic elements of its own grand strategy: an open economic order toward the world and the defense of the international system. For example, China's construction of a large economic zone through 'One Belt One Road' Initiative was against the economic interests that the United States had developed over many years.

It will probably be difficult for China to build a ‘new type of great power relationship’ with the United States. The U.S. strategy in the Far East has shaped the postwar order around China, so if China were to attempt to unilaterally change the status quo by force, that would be incompatible with the U.S. strategy. Therefore, strategic competition will inevitably arise between the United States and China. However, there is a possibility that China, which has grown more confident in its national power, and the Xi Jinping administration, which has entered its third term, will directly challenge the leadership of the international order by the United States. Therefore, in the strategic competition between the United States and China, it can be said that mutual strategic distrust and caution are increasing on both sides.

The Biden administration of the United States has positioned China as the ‘most serious competitor’ that challenges the prosperity and security of the United States and has made clear its policy to stop China’s encroachment through cooperation with allies, like-minded countries, and partner countries. Furthermore, the United States regards economic security as national security and is further strengthening its

efforts to prevent important and sensitive technologies from being diverted to strengthen China's military power. China has enacted a series of laws and regulations to counter this, and the influence of the strategic competition between the United States and China is spreading internationally.

Furthermore, the United States and China are increasingly at odds over Taiwan. In April 2021, the United States issued 'new guidelines' to promote exchanges with the Taiwanese authorities, demonstrating a stance of promoting engagement with Taiwan, allowing naval vessels to pass through the Taiwan Strait and selling weapons to Taiwan. On the other hand, since 2021, China has further increased the number of Chinese military aircraft entering the airspace southwest of Taiwan and has been conducting military training in the sea and airspace surrounding Taiwan. This situation is said to be the new normal and has resulted in further escalating tensions in the Taiwan Strait.

Against this background, not only the United States but also European countries have successively expressed their interest and concern for peace and stability in the Taiwan Strait. Taiwan is an extremely important partner for Japan, sharing fundamental

values such as freedom and democracy, and the stability of the situation surrounding the Taiwan Strait is also important for Japan's security. Therefore, since the stability of the Taiwan Strait is a common issue throughout the world, Japan, in cooperation with the international community, is watching with a sense of nervousness as China attempts to change the status quo by force.¹⁴

Thus, it can be said that Japan revised its national security strategy of 2013 in December 2022 in response to the deteriorating security environment in the Taiwan Strait.

4 Impact of the Russia-Ukraine War on Japan's Defense Policy

As the risk of military strategic conflict between the United States and China increases in East Asia, totalitarian Putin Russian President has used force to change the status quo in Ukraine. President Putin's argument for militarily invading Ukraine was that Ukraine was Russia's brother country and that it was part of Russia's territory. In addition to this, Russia cited Ukraine's violation of the Minsk Agreement as a reason for its

¹⁴ Ministry of Defense, *DEFENSE of JAPAN 2022* (Digest Version), p. 64.

military invasion,¹⁵ but the international community showed little interest in this reason.

The fact that Russia, a nuclear power, invaded Ukraine, a militarily small country, made it seem like China would invade Taiwan. At this point, it can be said that the need for cooperation among democratic countries, centered on the United States, has become clear in preparation for changes in the status quo caused by the force of totalitarian states such as Russia and China.

The general lessons that could be drawn from the Russo-Ukrainian war were: In other words, ① It was confirmed that wars between states occur not only for political reasons but also for geopolitical reasons; ② That Russia's deep-rooted expansionist tendencies have remained consistent to this day; ③

¹⁵ The Minsk Agreement consists of Minsk 1 and Minsk 2. Minsk 1 is a document signed by Ukraine, the Russian Federation, the Donetsk People's Republic, and the Lugansk People's Republic on September 5, 2014, in which the Organization for Security and Co-operation in Europe (OSCE) agreed to ceasefire in the Donbas region in eastern Ukraine. They agreed temporary special status to areas controlled by separatists, the holding of local elections, and amnesty for the parties concerned, but the ceasefire agreement was completely broken in January 2015. Afterwards, because of peace negotiations among the leaders of Ukraine, Russia, Germany, and France, an agreement of Minsk2 was reached on the withdrawal of heavy weapons, the establishment of a buffer zone, the withdrawal of foreign forces and weapons, and the expansion of autonomy to Donetsk and Lugansk oblasts and a ceasefire was announced to come into effect from midnight on February 15th of 2015.

The battle in the realm of society and human cognition has an important meaning; ④ The actions of the Russian military, which are suspected of serious violations of international law, have extremely worsened Russia's position in the international community; and ⑤ The idea was that even small and medium-sized countries could compete to a certain degree with large powers if they were legitimate and had the support of international public opinion.

The lessons Japan learned from this war were as follows. In other words; ① What is most important when considering security is that the Japanese themselves have a strong will and ability to protect their own country; ② The United States has to show a clear stance of protecting Japan against threats from China and other countries; ③ Close consultation with the United States is important in order to further ensure the reliability of extended deterrence;¹⁶ and ④ The ability to continuously obtain necessary weapons in times of war, whether produced domestically or imported, was extremely important.

¹⁶ Extended deterrence is ultimately about changing an adversary's cost calculations and expectations, and in the process deterring attacks against America's allies. It also convinces adversaries that attacks on U.S. allies will invite U.S. retaliation. Yagi Naoto, 'US Extended Deterrence and East Asia,' *Maritime Self-Defense Force Staff College Strategic Research*, November 2016 (Special edition) p. 46.

As mentioned above, Japan was completely dependent on the military power of the United States for its defense policy but was shocked by Russia's invasion of Ukraine and was forced to consider the reality of global security issues. Japan recognized that maintaining the status quo and an international order based on law were crucially important national interests.

In order to respond to rapid changes in the security environment of the international community, on February 16, 2022, Japan's Cabinet approved three security-related documents such as the Revised National Security Strategy, the National Defense Strategy, and the Defense Force Development Plan to reflect it in Japan's security strategy and defense policy after the Russia-Ukraine War.

5 Japan's Defense Policy Based on the Revised National Security Strategy

The National Security Strategy is positioned as the highest-level policy document regarding national security, and is a cross-cutting strategy for the government to cover not only the traditional fields of foreign affairs and defense, but also

economic security, technology, information, etc. Strategies for response are provided.¹⁷

As mentioned above, Japan created its first national security strategy in 2013 and expressed its basic philosophy of national security. In other words, Japan must ①continue to maintain its path as a peace-loving nation in the future security environment, ②ensure the security of Japan and the peace and stability of the Asia-Pacific region from the standpoint of proactive contribution to peace based on the principle of international cooperation, and ③contribute more actively than ever to ensuring the peace, stability, and prosperity of the international community.¹⁸

According to the 2013 National Security Strategy, Japan's national interests are to maintain its sovereignty and independence, preserve its territory, and ensure the safety of life, body, and property of the Japanese people, and to preserve its rich culture and traditions. The goal is to maintain the peace and security of Japan, which is based on freedom and democracy, and to fulfill the existence of the nation. Furthermore, it is also

¹⁷ Ministry of Defense, DEFENSE of JAPAN 2023, p. 199.

¹⁸ Japanese National Security Council and the Cabinet decision “*About the National Security Strategy*”, December 17, 2013, p. 3.

in Japan's national interest to maintain and defend an international order based on rules and universal values such as freedom, democracy, respect for fundamental human rights, and the rule of law.¹⁹

Japan revised its National Security Strategy on December 16, 2022, and at the root of this was the recognition of the following events in the international community. In other words, ①It has become clear that peace and development of the international community cannot be achieved through globalization and interdependence alone; ② Some countries that do not share universal values are showing signs of attempting to revise the existing international order based on their own historical views and values; ③The fundamental principle of the international community, the general prohibition of the use of force, has been blatantly violated by the permanent members of the United Nations Security Council; ④With Russia's invasion of Ukraine, the foundations of the rules that shape the international order were easily broken; and ⑤The scope of national security has expanded to areas that had previously been considered non-military, such as the economy and technology.

¹⁹ Ibid., p. 4.

And the strategy points out that the boundaries between military and non-military fields are becoming blurred.²⁰

The strategy also aims to solidify preparations for the worst-case scenario, including fundamental strengthening of defense capabilities, for domestic reasons, and to ensure Japan's peace and prosperity, the security of its people, and coexistence with the international community. It points out that Japan's national interests, including mutual prosperity, must be protected. This strategy provides strategic guidelines for policies in fields related to Japan's security, such as diplomacy, defense, economic security, technology, cyber, maritime, space, information, Official Development Assistance, ODA, and energy.²¹

The strategy also focused in particular on Russia's actions, pointing out that Russia's external activities and military trends, such as the recent invasion of Ukraine, are shaking the foundations of the international order, and further noted that European countries view Russia's actions as the most serious and direct threat to their security. Furthermore, the strategy recognizes that Russia's external activities and military trends in

²⁰ *National Security Strategy of 2022*, pp. 12-13 ·

²¹ *Ibid.*, p. 13.

the Indo-Pacific region, coupled with its strategic cooperation with China, are a strong security concern for Japan, and clearly expresses a sense of wariness toward China.²² This shows that the strategy was greatly influenced by the outbreak of the Russo-Ukrainian war.

The strategy refers to the prioritized strategic approach and the main measures that constitute it, and defines the main elements of Japan's overall national power related to security as ①diplomatic power, ②defense power, and ③economic power, ④technical ability, and ⑤information ability. It also indicates that Japan and the United States will develop efforts centered on diplomacy to prevent crises, actively create a peaceful and stable international environment, and strengthen a free and open international order. It is important to ①strengthen Japan-US. alliances, ②maintain and develop a free and open international order, and strengthen cooperation with allies and like-minded countries.²³

Furthermore, the strategy calls for deepening security cooperation with the United States by coordinating operations

²² Ibid., p. 20

²³ Ibid., pp. 22-23.

between Japan and the United States, improving interoperability, deepening cooperation in areas such as cyber and space, and cooperating in equipment and technology.²⁴ Japan has loudly advocated in its national strategy to further strengthen the deterrence and response capabilities of the Japan-U.S. alliance in order to deter attempts to unilaterally change the status quo through force.

Based on the vision of a Free and Open Indo-Pacific, FOIP, the Self-Defense Forces are actively promoting multilateral and multilayered defense cooperation and exchanges to strengthen cooperation with as many countries as possible. In recent years, Japan has been promoting defense cooperation and exchanges, including high-level exchanges, joint training, and capacity-building support, not only with allies but also with a variety of countries in Asia, Africa, and Europe.²⁵

The most appreciated aspect of the National Security Strategy of 2023 is that Japan has clarified its relationship with Taiwan. In other words, Taiwan is an extremely important partner and dear friend of Japan, with whom Japan share fundamental values including democracy, and with whom Japan

²⁴ Ibid., p. 29.

²⁵ Ministry of Defense, *DEFENSE of JAPAN 2023*, p. 360.

has close economic ties and people-to-people exchanges. Peace and stability in the Taiwan Strait are essential elements for the stability and prosperity of the international community, and Japan has made it clear that it will take various initiatives based on its position of supporting the peaceful resolution of cross-strait issues.²⁶ Japan sent a strong message to China not to make an armed invasion of Taiwan.

6. The Issue of Strengthening Stand-off Capabilities in the Japan's Defense Policy

The National Defense Strategy of 2022, which was approved by the Cabinet at the same time as the National Security Strategy of 2022, replaces the National Defense Program Guidelines, which have been formulated six times since 1976.²⁷ In addition, the Defense Buildup Program of 2022 aims to strengthen its defense capabilities so that in the event of an invasion of Japan by fiscal 2027, Japan will take primary responsibility for dealing with it, and will be able to deter and eliminate it while receiving support from allies and others.²⁸

²⁶ *National Security Strategy of 2022*, p. 24.

²⁷ *National Defense Strategy of 2022*, p. 3.

²⁸ *Defense Buildup Program of 2022*, p. 4.

It has been highly evaluated that the three security-related documents all recognized the enhancement of the Self-Defense Forces' stand-off defense capabilities as an important capability for fundamentally strengthening defense capabilities. Stand-off defense capability is the ability to deal with invading Chinese ships and landing forces from outside the threat zone to protect Japan's territory, which extends approximately 3,000 km from north to south and east to west.²⁹ In other words, as China has significantly improved the performance of its radars and various missiles, Japan will be able to deal with Chinese warships from a position outside the threat zone to effectively deter attacks against Japan. Therefore, Japan decided to work on strengthening its stand-off defense capabilities.

Specifically, Japan will conduct and continue research and development of Type12 surface-to-ship guided missiles with improved capabilities (ground-launched, ship-launched, and aircraft-launched types), high-speed glide missiles for island defense, and hypersonic 3 guided missiles. Japan will implement longer-range firing of various guided missiles.³⁰

²⁹ *National Defense Strategy of 2022*, p. 23.

³⁰ *Japan's Defense White Paper of 2023*, p. 280.

In addition, Japan will mass-produce standoff missiles domestically and introduce standoff missiles such as the U.S.-made Tomahawk. Furthermore, Japan will proceed with development to diversify its launch platforms and will develop a vertical missile launch system (VSL) that can be mounted on submarines and a system that can be mounted on transport aircraft, in order to improve the operational capabilities of standoff missiles.³¹

In order to prevent ballistic missile attacks, Japan will utilize stand-off defense capabilities as an unavoidable minimum self-defense measure and the ability to carry out effective counterstrikes in the enemy's territory. By possessing the ability to carry out such an effective counterattack, Japan will be able to restrict the enemy's missile launches, thereby deterring the enemy's missile attacks.³² Japan decided to have the ability to counterstrike against Command center or the missile launcher of the country that launched the missile

There are several arguments regarding strengthening this counterattack capability. For example, the possession of

³¹ Ibid.

³² Ibid., p. 283.

counterattack capability is highly praised for fundamentally changing the conventional basic defense force. However, the National Security Strategy states that while the traditional ‘exclusive defense’ concept of fighting in Japanese territory has not changed, the counterattack capability will attack missile launch bases and command centers in Chinese territory. The argument is that the relationship between ‘exclusive defense’ and ‘counterattack capability’ is unclear.

In addition, although missile defense is a simple means of defense in a sense by shooting down incoming missiles, the targets of the kill chain necessary to operate counterattack capabilities are not only China but also Russia and North Korea. And joint operations between Japan and the United States are necessary to effectively utilize counterattack capabilities, and there is a possibility that the United States will share necessary information from satellites, such as location information of attack targets and missile queuing. In other words, the question is whether it is possible for Japan and the United States to prepare for a joint response and to unify their minds.

Finally, looking at the roadmap for stand-off defense capabilities, Japan will initially purchase Tomahawk and other

stand-off missiles from the United States, but will develop ground-launched missiles by 2025. The plan is to develop a ship-launched missile by 2026, an aircraft-launched stand-off missile by 2028, and complete development of a hypersonic guided missile by 2031.³³ Questions have also been raised, such as whether Japan will be able to develop a stand-off missile that deters attacks by China within about 10 years.

Conclusion

Ever since Japan regained its sovereignty after World War II, Japan has maintained a vague concept of security. In other words, the targets of threat are traditional, such as military invasions, terrorism, crime, economic blockade, daily life, natural disasters, etc., and the targets of protection are life and property, political freedom, economic prosperity, cultural tradition, etc. According to the provisions of the Constitution, Japan's defense policy had no other options than contributing to the activities of the United Nations as a member and jointly defense with the United States in accordance with the Japan-U.S. Security treaty.

³³ Defense Buildup Program, op.cit., p. 37.

However, after Russia's invasion of Ukraine, Japan realized that the rule-based international order was weakening and to prepare for the modernization of China's military, Japan dramatically changed its security and defense policy. In other words, based on a sense of crisis regarding the collapse of the rule-based international order and China's possible military invasion, Japan divides its security policy into two concepts, external security and internal security, and aims to prevent and stable against unstable international security environment. In other words, the former security policy that strengthens defense capabilities to deal with threats to the survival of Japan, while the latter security policy that implements cyber security, maritime security, space security, energy security, etc.

As for external security, which is security in its original meaning, targets military aggression from outside, destruction of the rule-based international order, and unilateral change of the status quo by force, and targets to be protected are traditional sovereignty and independence. In addition to respecting the lives and property of the people, freedom, democracy, and human rights, Japan added the rule of law and the maintenance and defense of the international order based on international law.

US-China Great Power Competition and the PLA Military Modernization:
Evaluation of Japan's Defense Policy and Its Impact

Japan will establish ways to deter Chinese invasion by strengthening Japan's defense capabilities and strengthening its national power and will strengthen deterrence by coordinating with like-minded countries and jointly imposing economic sanctions. In this way, Japan has implemented counterstrike capabilities that allow it to launch stand-off missiles and destroy them, and it is still within the framework of the traditional exclusive defense strategy of fighting within Japanese territory.

Although there is still debate over the possession of stand-off defense capabilities, Japan, under the constraints of Article 9 of the Constitution, adopts a pragmatic defense policy to deal with the uncertain international security environment. In other words, Japan revised its national security strategy to respond to the modernization of the Chinese People's Liberation Army and to stabilize the rule-based international order in cooperation with the nuclear-armed United States.

Japan's decisions on defense strategy will be irreversible based on a realistic change in the public's perception of the security environment and will also be an important step toward

deepening the Japan-U.S. alliance.³⁴ In other words, Japan started efforts to change its conventional passive defense policy to an active defense policy and make deterrence against China more effective.

³⁴ Watanabe Tsuneo, “What’s New in Japan’s Three Strategic Documents,” *CSIS*, September 20, 2023, <https://www.csis.org/analysis/whats-new-japans-three-strategic-documents>.

The Military Applications of China's Space Station Construction

Shiow-wen Wang (王綉雯)

(Assistant Research Fellow, INDSR)

Abstract

Space has emerged as the new frontline of the 21st century, where advanced countries are competing for control. China perceives space as a crucial domain for the modernization of the PLA (People's Liberation Army) and asymmetric warfare against the United States. The PLA has taken the lead in the planning, command, infrastructure, and personnel training in space. The construction of China's Space Station (CSS) stands as a cornerstone of China's manned space programs and represents a significant avenue for China to achieve "space supremacy".

Throughout the CSS construction, numerous advanced technologies have been employed, including artificial intelligence, robotic arms, digital twins, and energy-conservation technologies. In addition, supporting capabilities

such as satellite relay systems and heavy-lift carrier rockets have been developed. It is anticipated that numerous game-changing scientific findings and technological applications in space will arise in the future. This paper aims to explore the potential military applications of the Chinese space station while identifying its vulnerabilities concerning the major capabilities involved space station construction.

Keywords: space station, military application, advanced technology, PLA, Military-Civil Fusion

I Introduction¹

The fundamental construction of China's space station (CSS), Tiangong (天宫), meaning "Heavenly Palace", was completed in November 2022. This achievement marked China as the third country in the world, following the former Soviet Union and the United States, to establish a space station in Low-Earth Orbit (LEO). CSS represents the final step of the three-step development strategy of the Manned Space Engineering Project (载人航天工程), initiated in 1992. It signifies not only the prelude to China's first permanent orbiting manned space station but also a significant milestone in China's journey toward becoming a space and scientific power. Undoubtedly, its ramifications will extend across China's military, scientific, technological, and economic spheres.

Despite China's official emphasis on the scientific, technological, and peaceful applications of CSS, its military potential has received relatively less attention. Nonetheless, it is an established fact that space activities are utilized for military

¹ Part of this paper is rewritten from Wang Shiowwen and Zhou Ruomin, "Implications of China's Space Station Construction," *Annual Report on China's Political and Military Development Evaluation in 2022*, (Taipei: Institute for National Defense and Security Studies), pp. 195-217.

objectives. Satellites, for instance, serve critical roles in, military communications, tracking, positioning, imaging, navigation, reconnaissance, and surveillance.

Moreover dual-use space technology, derived from military origins, underscores the intertwining of military and civilian space endeavors. In China, the genesis of space programs like rockets and satellites can be traced back to the development of ballistic missiles, exemplified by, the Changzheng-1 (長征一號) carrier rocket, which is rooted in Dongfeng-4 (東風四號) missile technology.² Hence, from their inception, space programs such as satellites and space stations have harbored a military mission and characteristics.

China views space as a pivotal domain for the modernization the People's Liberation Army (PLA) and for asymmetric warfare against the United States. The PLA spearhead the planning, command, infrastructure development,

² Li Chengzhi, 'Breakthrough Development of China's Space Technology', *Journal of the Chinese Academy of Sciences*, 34(9), September 2019, pp. 1014-1027, http://old2022.bulletin.cas.cn/publish_article/2019/9/20190906.htm. (李成智, 〈中國航天技術的突破性發展〉, 《中國科學院刊》34(9), 2019年9月。)

The Military Applications of China's Space Station Construction and personnel training across all space programs.³ China's successful testing of the ASAT (Anti-Satellite Weapon) in 2007 substantiates its capability to engage in space warfare. The establishment of the Strategic Support Force (戰略支援部隊) in 2015 and the Aerospace Systems Units (航天系統部) in 2016, tasked with overseeing the overall aerospace system, underscores the PLA's prioritization of military capabilities in space.

Among these, the military applications of CSS are of particular concern to the U.S. government regarding national security. The space station, alongside the space shuttle and manned spacecraft, constituted one of the three major components of China's manned space program, and represents a crucial avenue for China to attain "space supremacy". This paper endeavors to explore the potential military applications of CSS concerning the major capabilities involved in its construction.

II Major Capabilities for CSS Construction

1. Characteristics of CSS construction

³ Lee, T. A. & Singer, P. W., "China's Space Program Is More Military Than You Might Think", *Defense One*, July 16, 2021, <https://www.defenseone.com/ideas/2021/07/chinas-space-program-more-military-you-might-think/183790/>.

The characteristics of CSS construction can be summarized as follows. Firstly, it was executed at an unprecedented pace. From the launch of the core module Tianhe (天和) in April 2021 to the successful docking of the experiment module Mengtian (夢天) on 1 November 2022, the basic structure of CSS was completed within approximately one and a half years. With 12 launches of carrier rockets, the “three modules in one” of CSS, comprising the core module Tianhe (天和), the experiment module of Wentian (問天), and the experiment module Mengtian (夢天), were realized.

Secondly, a “modular construction” approach was adopted. This method involves launching each segment into orbit sequentially and assembling them in LEO. Unlike the truss structure of the International Space Station (ISS), this approach facilitates the rapid disassembly, assembly, and integration of space vehicles such as space station using a unified electro-mechanical and thermal system.⁴ It is conceivable that CSS will

⁴ Yang Hong, Zhou Hao Cheng, and Li Wei, "Strategic Study on the Development of Space Station as the "Space Homeport": Co-Orbital Flight Application Mode," *Foresight Science and Technology* 2022, 1(1), p. 14. (楊宏、周昊澄、李偉，〈空間站“太空母港”共軌飛行應用模式發展戰略研究〉，《前瞻科技》2022, 1(1)。)

The Military Applications of China's Space Station Construction not only expand via in-space block assembly but also undergo continuous upgrades through module changes in the future.

Thirdly, CSS's basic dimensions are relatively modest. Compared to the International Space Station, CSS is only about one-fifth of its size.⁵ CSS has a successfully completed the in-orbit flights of 6 segments,⁶ with a maximum weight of approximately 100 tons and a maximum capacity to accommodate 6 persons for short-term stays and 3 persons for long-term stays. In contrast, the ISS comprises 16 segments weighing 419 tons and can host up to 7 astronauts for long-term stays.⁷

Given the anticipated trends towards low-orbit activities, small-sized structures, and increased robotization in space

⁵ What's Driving China's Race to Build a Space Station?', *China Power, CSIC*, <https://chinapower.csis.org/chinese-space-station/>. Accessed on September 10, 2023.

⁶ The six spacecrafts flying together in orbit were Tianhe (天和), Wentian(問天), Mengtian (夢天), Shenzhou 14 (神舟十四號), Shenzhou 15 (神舟十五號), and Tianzhou 5 (天舟五號).

⁷ For a basic comparison between China's Tiangong space station and the International Space Station (ISS), see Shiow-Wen Wang, 'Commentary on the Construction of China's Tiangong Space Station,' *Defense and Security Bi-Weekly*, Vol. 57, July 1, 2022, p. 67. (王綉雯, 〈中國「天宮」太空站建設之評析〉, 《國防安全雙週報》第 57 期, 2022 年 7 月 1 日, 頁 67。)

vehicles,⁸ China's permanent manned space station holds the potential for fostering significant synergies in human-robot collaboration in space.

2. Critical Technologies for CSS Construction

Throughout the process of CSS construction, numerous advanced dual-use technologies have been employed. Just as U.S. aerospace technologies have contributed to both the economy and military operations, the advanced technologies utilized in CSS construction also deserve attention. The key technology applications can be summarized as follows:⁹

(1) Artificial Intelligence

As early as the 1980s, Chinese experts identified artificial intelligence (AI) applications as the primary direction for China's aerospace technology development.¹⁰ In recent years,

⁸ Yao Baoyin, Mao Lei, and Wang Zhibin, 'The Application of Artificial Intelligence Technology in Aerospace Equipment Field', *Modern Defense Technology*, Vol. 51, No. 2, April 2023, p. 38. (姚保寅、毛磊、王智斌，〈人工智能技術在航天裝備領域應用探討〉，《現代防禦技術》第51卷第2期，2023年4月，頁38。)

⁹ See Wang Shiowwen and Zhou Ruomin, 'Implications of China's Space Station Construction,' *Annual Report on China's Political and Military Development Evaluation in 2022*, (Taipei: Institute for National Defense and Security Studies), pp. 201-209. (王綉雯、周若敏，〈中國太空站建設之意涵〉，《2022年中國政軍發展評估年報》，頁201-209。)

¹⁰ See 'Aerospace V Academy 502 Director Liu Lei: Artificial Intelligence Technology Empowers Space Vehicle Control System Development | 2020

The Military Applications of China's Space Station Construction

the rapid advancements in artificial intelligence have positioned China as the world's second AI power after the United States, with its space applications expanding accordingly. AI has found utility in various areas, including fast and low-cost rocket launches, rapid processing of Earth observation data, allocation of communication spectrum and anti-interference measures, formation and swarm flying of satellites, autonomous control of manned spacecraft, and enhancement of the space surveillance and data analytics capabilities for space situational awareness systems.¹¹

One of the most notable AI applications is in the autonomous docking and rendezvous of spacecraft. Through AI algorithms, spacecraft can autonomously sense, recognize, decide, and learn in orbit, enabling automatic navigation, measurement, and docking, thereby significantly reducing required time.

Airborne Space Information Conference', 36Kr, December 21, 2020, <https://36kr.com/p/1020005855003905>. (〈航天五院 502 所總監劉磊：人工智慧技術賦能空間飛行器控制系統發展 | 2020 空天資訊大會〉，〈36Kr〉，2020 年 12 月 21 日。)

¹¹ Yao Baoyin, Mao Lei, and Wang Zhibin, 'The Application of Artificial Intelligence Technology in Aerospace Equipment Field', *Modern Defense Technology*, vol. 51, no. 2, April 2023, pp. 35-39. (姚保寅、毛磊、王智斌，〈人工智能技術在航天裝備領域應用探討〉，《現代防禦技術》第 51 卷第 2 期，2023 年 4 月，頁 35-39。)

Notably, during CSS construction, remarkable progress has been achieved in autonomous spacecraft docking technology. For instance, the Tianzhou-2 (天舟二號) cargo spacecraft, tasked with the logistic of space station construction, successfully docked with the core module Tianhe (天和) approximately eight hours after launch in May 2021, showcasing significant advancements in autonomous docking capabilities. This stands in stark contrast to, previous spacecraft docking, which took about 2 days and required manual intervention from the Beijing Aerospace Flight Control Center (北京航天飛行控制中心).

In November 2022, the Tianzhou V (天舟五號) cargo spacecraft achieved a world record by docking with the Tianhe (天和) core module just 2 hours after launch.¹² In addition, in July 2022, two large space vehicles weighing more than 20 tons, the Wentian (問天) experiment module and the Tianhe (天和) core module, accomplished their autonomous docking, marking the first successful docking of a large Chinese

¹² Fu Yifei, 'Tianzhou V Launch Successfully Sets World's Fastest Rendezvous Docking Record, *People's Daily Online*, Nov. 14, 2022, <http://finance.people.com.cn/BIG5/n1/2022/1114/c1004-32565567.html>. (付毅飛,〈天舟五號發射成功 創世界最快交會對接紀錄〉,《人民網》,2022年11月14日。)

The Military Applications of China's Space Station Construction spacecraft in orbit. On November 30 of the same year, the Shenzhou 15 (神 舟 十 五 號) manned spacecraft, the final flight in the construction phase of CSS, successfully docked with the Tianhe (天 和) core module, enabling six spacecraft to fly together in orbit as one integrated unit.¹³ As CSS progresses towards the new phase of being a permanently manned station, spacecraft will need to fly intensively to transport supplies and persons. Thus, the development of autonomous docking technology is expected to become increasingly sophisticated to meet the demands of this new stage.

(2) Robotic Arm: Visual and Crawling

The robotic arm deployed in CSS serves as a large sizable space robot, comprising two arms responsible for station construction, maintenance, and extravehicular operations. CSS features two robotic arms: large arm of the Tianhe (天 和) core module and the small arm of the Wentian (問 天) experiment module. The large arm handle heavy tasks, such as lifting astronauts out of capsules and transporting cargo, while the

¹³ The Last Stick in the Construction Period of China's Space Station! 3 Noteworthy Points of Shenzhou15', *People's Daily Online*, November 30, 2022, <http://finance.people.com.cn/BIG5/n1/2022/1130/c1004-32577494.html>.(〈中國空間站建造期最后一棒！神舟十五號三大看點〉，《人民網》，2022年11月30日。)

small arm is suited for delicate work like equipment maintenance. These arms can operate independently or connect to form a 15-meter-long robotic arm.

Although the United States developed the technology of capturing, repairing, and releasing satellites with robotic arms in 1984,¹⁴ China's space robotic arm exhibits several advantages of "technology latecomer" over counterparts like the U.S., Japanese and Canadian ones. First, it mimics a human arm. China's space robotic arm has seven movable joints (seven degrees of freedom: three at the shoulder, one at the elbow, and three at the wrist) and uses a steel wire lasso to grab and drag the spacecraft from various angles. Second, its head and tail are convertible. China's space robotic arm is equipped with the same devices and has the same function at both ends, so it can convert head to tail at any time. Third, it has visual ability. Both ends of the arm and the elbow are equipped with a high-accuracy

¹⁴ In 1965, the U.S. developed the technologies of approaching, capturing, and satellite rendezvous and docking; in 1973, U.S. astronauts went out of the capsule to repair the solar wings of the space laboratory. Since then, the U.S. has accomplished several manned missions in orbit, such as assembling, repairing, and replenishing satellites, such as space telescopes, communication satellites, space station antennae solar wings, etc. In 1984, astronauts manipulated a robotic arm to capture and repair satellites and then released them back to orbit successfully.

The Military Applications of China's Space Station Construction camera, which can recognize and transmit real-time images to the computers inside the space station. This means that CSS has a few cameras that can detect and film the situation outside the cabin from different angles. Fourth, it can crawl along the cabin. Each end of the robotic arm has an "end-effector", which can be connected to several electrical ports on the surface of the space station, allowing the arm to move like some kind of caterpillar on the surface of the space station. China's space robotic arm is more flexible than the American and Japanese ones that operate at fixed points on the ISS, or the Canadian Arm 2 that moves in a linear slide.

(3) Digital Space Station

Another technological advantage of CSS as a latecomer is the application of Digital Twin technology to construct a virtual twin of the physical space station. This digital space station collects data from numerous sensors within the physical space station, enabling real-time monitoring of its status. Digital Twin technology serves dual purposes: life-cycle management and real-time diagnosis of abnormal situations, as well as facilitating scientific experiments and research on the space station. Remote scientific experiments conducted via digital twin models have achieved minimal time lags less than two seconds between CSS

and ground laboratories.¹⁵ While still in the early stage of development, Digital Twin technology holds promise for enhancing logistical support for various military assets, including fighter aircraft, battleships, tanks, missiles, and satellites.

(4) Energy Conservation: Flexible Solar Wings and Hall-Effect Thruster

CSS features innovative energy-saving technologies, including flexible solar wings and Hall-effect thrusters. The flexible solar wings, a first-of-its-kind application by China in space, offer advantages over rigid or semi-rigid designs in terms of size, retraction capability, weight, and thickness. For instance, their thickness is only one-fifteenth of a rigid solar wing. Equipped with Gallium Arsenide thin-film batteries, these wings boast higher photovoltaic conversion rates. CSS's two flexible solar wings, combined with a sun orientation device that autonomously tracks the sun, are projected to meet the station's power needs for ten years.

¹⁵ This was said by Zhong Hong'en (鍾紅恩), a researcher at the Space Application Engineering and Technology Center of the Chinese Academy of Sciences., "Press Conference on the Progress of China's Space Station Construction Held," *China Manned Space Agency*, April 17, 2022, <https://reurl.cc/0X5E7M>. (〈中國空間站建造進展情況新聞發佈會召開〉,《中國載人航天工程網》,2022年4月17日)

By mathematical modeling and machine learning of artificial intelligence, the camera of CSS collects the vibration parameters of the solar wings, calculates the attitude adjustments of the spacecraft and orders the execution.¹⁶ In July 2023, the flexible solar wing were applied to the communication satellites of private enterprises.¹⁷

Furthermore, CSS employs four Hall electric propulsion engines deployed in the core module Tianhe (天和), marking the first use of electric propulsion engines on a manned spacecraft and is considered by China to be a revolution in space energy. Although still maturing, these engines offer reduced

¹⁶ ‘China's Largest Flexible Solar Wing Appeared in Space: the “energy source” of China's Space Station’, *Ministry of National Defense of the People's Republic of China*, August 12, 2022, (〈我國最大面積柔性太陽翼亮相太空：中國空間站的「能源源泉」〉, 《中華人民共和國國防部》), http://www.mod.gov.cn/photos/2022-08/12/content_4918001.htm; 〈我國空間站大型對日定向裝置「首秀成功」〉, *People's Daily Online*, August 19, 2022, <https://is.gd/0xAkh21>.

¹⁷ On July 23, 2023, China's "Changzheng No. 2 Ding"(長征二號丁) carrier rocket launched into orbit the "Lingxi03 Star"(靈犀 03 星) communications satellite of the private enterprise "Galaxy Space" (銀河航天) Company, which is China's first communications satellite equipped with a flexible solar wing. ‘China's first flexible solar wing satellite successfully launched: Galaxy Space's Lingxi 03 star, verifying low-orbit broadband satellite communications’(〈我國首款柔性太陽翼衛星成功發射：銀河航天靈犀 03 星，驗證低軌寬帶衛星通信〉), *IT Home*, July 26, 2023, <https://www.ithome.com/0/708/204.htm>.

energy consumption and lower operating costs, potentially benefiting future long-distance space flights.

These critical technologies deployed in CSS construction signify China's significant strides in space exploration and underline the station's dual-use capabilities, with implications for both civilian and military domains.

3. Supporting space capabilities:

In addition to its inherent capabilities, the construction of CSS requires support from other systems, particularly in communication and transportation between space and the ground.

(1) “Celestial Link” Relay Satellite Communication System

The crucial infrastructure facilitating between CSS and the ground is the "Celestial Link" (Tianlian, 天鏈) relay satellite system. This system, situated in geosynchronous orbit (GSO), approximately 35,786 kilometers above the Earth, integrates various space vehicles and connects them to the ground. China completed the initial construction of the “Tianlian-1 (天鏈一號)” relay satellite system in 2012, marking it the third country in the world, after the United States and the Soviet Union, to possess a relay satellite system with global coverage.

The Military Applications of China's Space Station Construction

Subsequent launches, have expanded the system, with the second-generation relay satellite system achieving full coverage of the low and medium Earth orbits by July 2022. The “Celestial Link”（天鏈）system facilitates data transmission, in-orbit measurement, and control, rendezvous and docking of various satellites in low and medium orbits, as well as launch measurement and control of the Long March（長征）series of carrier rockets.¹⁸

Moreover, in response to the role of “Starlink” in the Russian-Ukrainian war, China is actively developing a comprehensive satellite internet network covering high, medium, and low orbits. This includes upgrading high-orbit satellite internet, China is actively laying out a LEO satellite communication network, with ultimate goal of establishing a multi-layered communication infrastructure known as the “Integrated Air, Space, Earth, and Sea Communication System”

¹⁸ China's "Celestial Chain": The "Golden Bridge" Between Heaven and Earth (Building the Dream of a Home in Space - Chronicle of the Construction of China's Space Station (7))(〈中国「天鏈」：天地「金橋」(築夢「太空之家」—中國空间站建設記⑦)〉), *People's Daily Online*, July 19, 2021, <http://finance.people.com.cn/BIG5/n1/2021/0719/c1004-32161259.html>.

(空天地海一體化通訊體系)¹⁹ mainly based on terrestrial networks (5G/6G) and supplemented by space networks.

(2) Carrier Rockets and Spaceplanes

Transportation between space and ground primarily relies on China's Long March (“Chang Zheng”, 長征, CZ) heavy-lift carrier rockets and the Expedition (“Yuan Zheng”, 遠征) series of orbital transfer vehicles (upper stage of a carrier rocket) developed by the China Aerospace Science and Technology Corporation (CASC, 中國航天科技集團), these vehicles are supplemented by the Fast Boat (“Kuai Zhou”, 快舟) and Jet Dragon (“Jie Long”, 捷龍) series of carrier rockets from the China Aerospace Science & Industry Corporation (CASIC, 中國航天科工集團), as well as rockets from private aerospace enterprises. China's aerospace programs, rooted in missile technology, have seen significant progress in launch vehicles development over the past five decades.

¹⁹ China intends to build a multi-layered communications infrastructure with terrestrial networks (5G/6G) as the mainstay and space-based networks as a supplement, including space-based (high, medium, and low orbit satellite communication networks), air-based (communication networks for airplanes, hot air balloons, drones, etc.), land-based (ground-based honeycomb networks), and sea-based (oceanic underwater wireless communications and offshore coastal wireless networks), etc., to realize real-time communications from any location around the globe.

The Long March series, starting with the successful launch of the Dongfanghong No. 1 (東方紅一號) satellite in 1970, has expanded its capabilities to encompass a complete spectrum of products, launching 64 rockets in 2022 alone, ranking China second globally in terms of launch quantity.²⁰

The basic carrying capacity of the “Long March” (長征) series carrier rockets is 25 tons in LEO, and the emergency launch time of the rockets has been shortened from weekly to hourly. China is developing a heavier carrier rocket with a larger capacity for the “Crewed Mission to the Moon” (載人登月工程) project. In addition, the “Expedition” (遠征) series of orbital transfer vehicles have the capability of autonomous in-orbit flight, with a long flight time and multiple launches, and have already successfully delivered various satellites and space probes into variable orbits.²¹

Furthermore, China is testing spaceplanes capable of orbital flight, with successful tests conducted in September 2020

²⁰ There will be a total of 186 global space launches in 2022, with the U.S. in first place with 87 launches and Russia in third place with 22 launches.

²¹ Li Dong and Li Pingqi, ‘Development of China's Space Transportation System and Future Prospects’, *Prospective Science and Technology* 2022, Vol. 1, Issue (1), p. 54. (李東、李平岐，〈中國航天運輸系統發展及未來展望〉，《前瞻科技》2022, Vol. 1, Issue (1)，頁 54。)

and August 2022. These spaceplanes, launched by conventional launch vehicles (SLVs), stay in orbit before returning to Earth. Additionally, suborbital spaceplane tests have been conducted in 2022, hinting at potential co-orbital anti-satellite (ASAT) capability.²²

These supporting space capabilities underscore China's commitment to enhancing its space infrastructure, both for civilian applications and potentially for military purposes.

III Potential Military Applications

Based on the discussion of the dual-use space technologies applied to CSS, the potential military applications of CSS can be summarized as follows:

1. Space-based Command Center

CSS could serve as a pivotal space-based command center, integrating various satellite networks and constellations to enhance Satellites are very crucial to China's intelligence information warfare capabilities. Learning from the 1991 Gulf War, China accelerated its construction of various satellite

²² Bingen, K. A, Johnson, K. & Young, M., "Space Threat Assessment 2023", CSIS, April 14, 2023, p. 10, <https://www.csis.org/analysis/space-threat-assessment-2023>.

The Military Applications of China's Space Station Construction networks and constellations.²³ The PLA continues to integrate the functions of satellites, for example, surveillance, PNT (positioning, navigation, and timing), and communications into its weapons and command and control systems, to reduce the U.S.'s military information advantage.²⁴

The space station is seen as the largest satellite in near-Earth orbit. China has more than 700 satellites in orbit, and by March 2023, 347 satellites were launched by the PLA, with the major purpose of collecting information on U.S. military deployments around the world.²⁵ If a manned CSS serves as the hub or pivot, it could integrate various satellites in high, medium, and low orbits as one web via inter-satellite link (crosslink), and provide comprehensive functions such as Earth observation,

²³ Langeland, K. and Grossman, D., "Tailoring Deterrence for China in Space", *RAND*, 2021, p. 28. https://www.rand.org/pubs/research_reports/RRA943-1.html.

²⁴ Annual Threat Assessment of The U. S. Intelligence Community, *Office of The Director of National Intelligence*. February 6, 2023, p.8, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2023-Unclassified-Report.pdf>.

²⁵ 'China's Satellites 'Overtak in Corners? Attempts to challenge Starlinks, Experts: There are 2 major obstacles to overcome (〈中國衛星「彎道超車」? 企圖 PK 星鏈 專家: 有這 2 大障礙跨不過〉), *Newtalk News*, May 24, 2023, <https://newtalk.tw/news/view/2023-05-24/872597>; "Space Force chief says U.S. is facing a 'new era' of threats beyond Earth", *CNBC*, APR 20 2023, <https://www.cnbc.com/2023/04/20/space-force-chief-on-new-era-of-threats-beyond-earth.html>.

communications, navigation and positioning, space situational awareness, early warning, and climate prediction.²⁶

Although satellites can automatically detect and analyze data by using artificial intelligence, astronauts in the space station can play more important roles. For instance, they can command remote-sensing satellites directly to gather the required intelligence in real time and make quick and comprehensive judgments and responses to handle the situation immediately. In other words, remote-sensing satellites can be used to collect military intelligence and issue early warnings in peacetime, while in wartime, they can provide unilateral transparency of the battlefield situation to eliminate the fog of war. Furthermore, astronauts can command military satellites, monitor the movement of enemy intercontinental missiles, guide anti-missile interceptions, observe the launch of adversary missiles and space vehicles, and even observe underground nuclear test explosions. CSS could function as China's C4ISR

²⁶ China's current in-orbit satellite platforms include the "Dongfanghong" (東方紅) platform, the "Shijian" (實踐) platform, the "Jianbing" (尖兵) platform, the "Beidou" (北斗) platform, as well as some of the small and micro-satellite platforms. Among them, the "Zhongxing" (中星) "satellites of the "Dongfanghong" platform include military communication satellites such as "Fenghuo" (烽火) and "Shentong" (神通) series.

The Military Applications of China's Space Station Construction (Command, Control, Communication, Information, Intelligence, Surveillance, and Reconnaissance) hub in space or even a space command center for military operations on the ground.

2. On-Orbit Servicing Center

CSS is poised to become an On-Orbit Servicing center for spacecrafts. "On-Orbit Servicing" (OOS) refers to the in-orbit inspection, maintenance, orbit modification (including relocation and repositioning), refueling and commodities replenishment, equipment upgrade, repair, in-orbit assembly and repair of spacecraft, and debris mitigation.²⁷ Due to the astronauts' comprehensive judgment of the complex environment, the station's capabilities to provide logistic support in terms of fuel, spare parts, and equipment, and the robotic arm's function of capturing and releasing spacecraft, especially satellites, CSS will become an On-Orbit Service center for spacecraft.

²⁷ Davis, J.P., Mayberry, J.P. & Penn, J.P., "On-Orbit Servicing: Inspection, Repair, Refuel, Upgrade, and Assembly of Satellite in Space", *Center for Space Policy and Strategy*, April 24, 2019, pp. 2-3, https://aerospace.org/sites/default/files/2019-05/Davis-Mayberry-Penn_OOS_04242019.pdf.

However, it is impossible to carry out overly complicated maintenance in space, replacement of modules is more feasible. In this way, spacecraft can be quickly dismantled, assembled, replaced, and upgraded in orbit to meet various needs. Since the structural, electrical, data, and thermal interfaces are designed as a single unit, different modules can be mutually compatible and plug-and-play. For example, if a communication satellite is equipped with a synthetic aperture radar (SRA), it can be turned into a radar imaging reconnaissance satellite. The BeiDou (北斗) satellites could be quickly upgraded or turned into “navigation, communication, and remote sensing integration satellites”²⁸ (通導遙一體化衛星) through module replacement.

Furthermore, the station can also assemble large-scale space facilities in orbit, such as small nuclear power plants. They can be co-orbited with the station after assembly and fly together to test their performance before flying to the target orbit. In addition to the use of robotic arms to capture other countries’

²⁸ "Communications, Navigation and Remote Sensing Integration" refers to the concentration of communications, navigation, and remote sensing functions on a single small smart satellite, see the official website of the Chinese start-up "Elliptical Space and Time"(橢圓時空), <https://www.ellipspace.com/lists/35.html>, accessed September 14, 2023

The Military Applications of China's Space Station Construction satellites or push them out of orbit, the space station can also assemble and test large-scale space weapons to directly destroy the adversary's space equipment in space.

3. Space Weapons Platform

CSS holds the potential to function as a space weapons platform, leveraging its position in orbit to deploy offensive or defensive space weapons. China already has significant counter-space capabilities.²⁹ However, although China seems to have successfully developed and tested Earth-to-Space weapons, such as ground-based directed energy weapons that use lasers to interfere with the optical equipment of a satellite,³⁰ they may not be as good as space-to-space attacks directly launched by co-orbital ASAT weapons.³¹

As mentioned earlier, CSS is likely to be used as a platform for the OOS center of spacecraft. Therefore, spacecraft

²⁹ Langeland, K., and Grossman, D., "Tailoring Deterrence for China in Space", *RAND*, 2021, p. 26.
https://www.rand.org/pubs/research_reports/RRA943-1.html.

³⁰ Weeden, B. & Samson, V, "Global Counterspace Capabilities," *Secure World Foundation*, May 17, 2021, <https://swfound.org/counterspace/>

³¹ Regarding the types of space weapons, see Gleason, M.P. & Hays, P. L., "A Roadmap for Assessing Space Weapons", *Center for Space Policy and Strategy*, October 6, 2020, <https://csps.aerospace.org/papers/roadmap-assessing-spweapons>.

originally for peaceful use can be transformed into space weapons with offensive or jamming functions after replacing the weapon modules. These include nuclear weapons, electromagnetic railguns, co-orbital jammers, high-powered microwaves, and laser weapons. Moreover, CSS and small killer satellites could conduct swarming warfighting like an aircraft carrier with drones.

In addition, CSS could assemble and deploy large-scale military facilities in orbit. For instance, space-based missile defense interceptors can intercept intercontinental ballistic missiles when they pass through space. Space-based military facilities can attack the enemy's satellites in different orbits as soon as the war starts so that the adversary's troops will lose their capabilities of communication or PNT immediately. Moreover, if LEO satellites are equipped with high-power laser weapons, they can also attack their targets on the ground, at sea, or in the air.

China has tested its “close approach” and “rendezvous” technologies on LEO orbits and GEOs several times, proving its capabilities to develop space-based counter-space

The Military Applications of China's Space Station Construction weapons.³² Moreover, China has already developed a small laser device about 1.5 kilograms that can be mounted on satellites,³³ which could be used for laser communications and even space-based ASAT in the future.³⁴ Additionally, China tested a new weapon platform that combines a Hypersonic Glide Vehicle (HGV) and a Fractional Orbital Bombardment System (FOBS) in 2021. These new weapon platforms can stay in orbit and return to the atmosphere at 25 times the speed of sound on command to conduct airstrike.³⁵

As mentioned earlier, CSS is already equipped with several highly sensitive cameras and robotic arms that can crawl on the

³² Annual Threat Assessment of the U. S. Intelligence Community, *Office of the Director of National Intelligence*, February 6, 2023, p.8, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2023-Unclassified-Report.pdf> .

³³ Stephen Chen, "The Powerful Chinese Megawatt Laser 'Small Enough for a Satellite'," *South China Morning Post*, January 7, 2022, <https://www.scmp.com/news/china/science/article/3162566/chinese-megawatt-laser-powerful-small-enough-be-used-satellite>.

³⁴ Bingen, K. A, Johnson, K. & Young, M., "Space Threat Assessment 2023", CSIS, April 14, 2023, p.11, <https://www.csis.org/analysis/space-threat-assessment-2023> ; 'China's Satellite-Terrestrial Laser High-Speed Communication Business Application Experiment Successfully', *Xinhua News*, June 28, 2023, http://www.news.cn/2023-06/28/c_1129720992.htm. (〈我国星地激光高速通信业务化应用实验成功〉, 新華網, 2023 年 6 月 28 日。)

³⁵ Jennings, R. "China Has Capability to Use Space for Military Purposes, Experts Say", VOA, April 02, 2022, <https://www.voanews.com/a/china-has-capability-to-use-space-for-military-purposes-experts-say/6512155.html> .

surface of the capsule. In the future, if the astronauts in CSS can command supersonic air-to-ground missiles that stay in orbit, or if they can use space weapons such as lasers to neutralize adversary space assets, it will be difficult to prevent China to secure space dominance.

4. Testing Platform for Military Technology in Space

CSS serves not only as a hub for scientific research but also a testing platform for advanced military technologies due to the dual-use nature of many space technologies. Aerospace scientists from the Chinese Academy of Sciences have outlined four key areas of research on CSS: space life science and human body research, microgravity physics, space astronomy and earth science, and new space technologies and applications.³⁶

Research conducted in these areas has direct implications for military applications. For instance, the ability of human beings to live in space, new medicines and medical technologies, new materials, and new technologies for earth observation will

³⁶‘China’s space station will support large-scale scientific research’, *Xinhua News*, March 16, 2022, http://www.news.cn/2022-03/16/c_1128476664.htm.(〈中國空間站將支持大規模科學研究〉，《新華網》，2022年3月16日。)

The Military Applications of China's Space Station Construction be beneficial to the PLA in terms of logistic support and weather information. Advancement in space biology, meteorology, sports medicine, and life support, systems aimed at sustaining human life in space can also benefit the PLA's long-term operations on the ground and underwater.

Additionally, the integration of cold atomic clock technology into CSS can enhance the precision of the Beidou Navigation Satellite System (北斗衛星導航系統), providing the PLA with improved capabilities for precise missile strikes.

Furthermore research on new space technologies and applications, including in-orbit manufacturing, space robots and autonomous systems, space communications, and precision measurements,³⁷ can bolster the PLA's advantages in space and ground combat.

China's efforts to encourage private enterprises to enter the aerospace industry have led to the formation of a domestic aerospace industrial ecosystem.³⁸ These private enterprises play a crucial role in introducing advanced technologies from other

³⁷ Ibid.

³⁸ See Wang Shiowwen, "The Development of China's Aerospace Technology and Industry," 2021 *Report on The Development of the Chinese Communist Party's Politics and Military* (Taipei: INDSR), pp. 203-236.

countries through international cooperation or joint research and development, such as hyperspectral imaging, liquid engines for launch vehicles, and various new materials.³⁹ Through the Military-Civil Fusion (MCF, 軍民融合) policy, which aims to integrate civilian technologies into military applications, advanced technologies from private enterprises can be tested and integrated into PLA's military capabilities using CSS as a platform. This approach enables the PLA to leverage the expertise and innovation of both state-owned and private enterprises to advance its military technology capabilities.

5. Homeport and Intermediate Station in Space

The future development trajectory of CSS points towards systematization, large-scale operations, and high levels of automatization. CSS is envisioned to evolve into command and control center, accompanied by large dock-type maintenance stations and autonomous on-orbit service spacecraft. Together, these elements will form a multi-integrated space “on-orbit

³⁹ For example, In July 2023, China launched the Zhuquan II Remote 2 Launch Vehicle (R2LV, 朱雀二號遙二) into orbit. This is the world's first Liquid Oxygen Methane (LOM) rocket to be successfully orbited and is also the first liquid-engine launch vehicle independently developed by a private Chinese aerospace company to be successfully orbited.

The Military Applications of China's Space Station Construction service" fleet.⁴⁰ As digitalization and intellectualization trends continue, CSS is expected to become more deeply integrated with advanced technologies such as artificial intelligence, robotics, smart manufacturing. This integration will enable effective collaboration between human astronauts and robotic systems, maximizing operational efficiency.

Furthermore, following the completion of CSS construction, China officially announced its preliminary plan for "Crewed Mission to the Moon" (載人登月) in May 2023. This ambitious mission aims to achieve the first landing of two Chinese astronauts on the Moon before 2030. To realize this goal, China is developing a new type of heavy-lift carrier rocket, a new generation of manned spacecraft, a lunar lander, a lunar suit, and a manned lunar rover.⁴¹ This endeavor signifies China's intent to establish dominance in space between Earth and the

⁴⁰ Yang Hong, Zhou Haocheng, Li Wei, "Strategic Study on the Development of Space Station "Space Mother Port" Co-orbital Flight Application Mode," *Prospective Science and Technology* 2022, 1(1), p. 9. (楊宏、周昊澄、李偉，〈空間站“太空母港”共軌飛行應用模式發展戰略研究〉，《前瞻科技》2022, 1 (1)，頁9。)

⁴¹ 'China's preliminary program for manned lunar landing announced, how is the development of lunar landing equipment progressing', *Xinhua News*, July 20, 2023, http://www.news.cn/politics/2023-07/20/c_1129760361.htm. (〈中国载人登月初步方案公布，登月装备研制进展如何？〉，《新華網》，2023年7月20日)

Moon, prompting competition with the U.S. The completion of CSS demonstrates that China's capability to sustain human life in space for an extended periods through advanced technologies, operational sophistication, and resource resupply capabilities. Moreover, China has established a logistics system for LEO orbit, including life-supporting cargo transportation.⁴² CSS is poised to serve as a logistics supply station for a crewed lunar landing mission, further solidifying China's presence and capabilities in space exploration.

IV. Conclusion

In the 21st century, Space has emerged as a new frontline where advanced nations vie for control, seeking to enhance their military capabilities and national security while safeguarding their space assets. Space superiority not only supports operations across multiple domains but also plays a crucial role in peacetime and on the brink of war.⁴³

⁴² "Chinese Milestone Sets Stage for New Space Race", *The Japan Times*, November 30, 2022, <https://www.japantimes.co.jp/news/2022/11/30/asia-pacific/china-space-us-military-pla/> °

⁴³ "Karbler's addresses 2023 Space & Missile Defense Symposium", *U.S. Army*, August 9, 2023, https://www.army.mil/article/268969/karbler_addresses_2023_space_missile_defense_symposium.

The Military Applications of China's Space Station Construction

The construction of CSS represents a significant milestone, leveraging advanced technologies with the potential to catalyze game-changing scientific research and technological advancements. However, the operation of CSS also brings its vulnerabilities that must be addressed.

Firstly, CSS's conspicuous presence in LEO marks it susceptible to attacks. With an altitude only of 400-450 kilometers, and its location information is open to the public, CSS is very easy to be attacked by rockets or medium-range ballistic missiles launched from the ground. Therefore, at the beginning of a war, the space station could be the first target to be destroyed.

Secondly, the high cost associated with building and operating a space station presents financial challenges. The cost of building and operating the ISS was 21.5 billion dollars in 1988 and is estimated to be 94 billion dollars by 2027. While CSS's building and operating costs may be lower compared to its predecessors, sustaining financial support, especially for the Chinese Communist Party, could prove challenging.

This might be one of the reasons why CSS requires the participation of private enterprises to develop commercial

spaceflights and endeavors to foster international scientific cooperation to share the burden.

Lastly, CSS is vulnerable to various threats such as cosmic radiation, solar storms, space debris, and electronic warfare. Safeguarding its safety and integrity in orbit remains a critical concern for China's manned space station. Addressing this vulnerability of CSS, as China continues to assert its presence and capabilities in the realm of manned space exploration.

The Impact of China's Gray Zone Operations on Japan

LTG(Ret.) Mikio SHIBATA (柴田幹雄)

(Senior Research Fellow, Security Strategy Institute of Japan)

Abstract

This article mainly discusses the impact of China's gray zone operations on Japan. As far as the topic is concerned, this article has practical value. The structure of this article is as follows: (1)“Definition and forms of Gray Zone operations” ; (2)“Difficulties on response to Gray Zone operations” ; (3)“Dramatic change in Japan's Views of Gray Zone situations”; (4)“Japan's response to China's Gray Zone operations.

Keywords: Gray zone operations, Strategic Communication, Self-Defense Forces, The National Security Strategy

Introduction

The gray zone refers to a wide range of situations that are neither peacetime nor emergencies, and all acts other than the use of physical destructive force are considered gray zone operations.

The difficulty with gray zone operations is that they are legally conducted within a peacetime framework. The Self-Defense Forces, which have not been ordered to mobilize for defense, cannot take military action and must act based on their authority to deter and suppress illegal acts, just like the police.

Japan has adopted a restrained defense policy since the war, but in response to changes in the international situation, it is changing to a more realistic defense posture. Russia's invasion of Ukraine and China's military rise have significantly changed people's views on security.

In response, the Japanese government developed and announced The National Security Strategy, The National Defense Strategy, etc. This strategy broadly describes the direction Japan should take not only in the military and diplomacy, but also in the economy, science and technology, and information. The document also describes hybrid warfare in

gray zone situations as a means of strengthening efforts to seamlessly protect Japan in all directions. These include responses to cyber warfare, space, oceans, economics, energy, and information, including cognitive warfare.

Japan's approach to fighting in these areas as a gray zone situation has become more realistic. Japan Coast Guard responds to intrusions into territorial waters by Chinese vessels, and the Self-Defense Forces monitor them. The people's sense of crisis regarding the defense of the Nansei Islands and the Taiwan emergency is growing stronger. While there is generally little sense of crisis regarding cyber warfare, Japan has also said it will engage in offensive cyber warfare, but there has been no major objection to this.

Regarding the preservation of science and technology, the academic community's anti-military orientation and pro-China words and actions have also been criticized, and public awareness has begun to change. The concept of information warfare, which includes the cognitive domain, has appeared in national security, and the defense white paper also deals with warfare in the cognitive domain. This is one of the most

significant changes in public consciousness and deserves attention.

Overall, the public's awareness regarding gray zone operations has changed significantly over the past few years, and the tone of the mass media, which was somewhat liberal, has also changed to more calmness and realistic one. The extent of Chinese gray zone operation impact on Japan especially on people's mind has significantly reduced.

Japan take Flexible Deterrence Options(FDO) and Strategic Communication(SC). Japan should initiate proactive gray zone operation offensively not only protect and react Chinese operations.

グレーゾーンとは平時でも有事でもない幅広い状況のことであり、その状況下で起こる物理的破壊力行使以外のすべての行為をグレーゾーンの作戦と考える。

グレーゾーンの作戦の難しさは、それが法律的には平時の枠組みの中で行われることである。防衛出動が命令されていない自衛隊は、軍事的行動を採ることができず警察と同様不法行為の抑止、鎮圧をする権限に基づき行動しなければならない。

日本は戦後、抑制的な防衛政策をとってきたが、国際情勢の変化に対応してより現実的な防衛態勢に変わりつつある。ロシアのウクライナ侵攻、また中国の軍事的台頭により、国民の安全保障観が大きく変わった。これを受け日本政府は国家安全保障戦略、国家防衛戦略などを構築、発表した。この戦略では軍事・外交のみならず経済、科学技術、情報などについて日本の取るべき方向について幅広く記述されている。その中には、我が国を全方位でシームレスに守るための取り組みの強化として、グレーゾーン事態におけるハイブリッド戦についても記述されている。これらには、サイバー戦、宇宙、海洋、経済、エネルギー、認知戦を含む情報などへの対応が示されている。

グレーゾーン事態としてのこれらの領域での戦いについて日本の受け止め方もより現実的になってきた。中国交船の領海侵犯に対しては日本の海上保安庁が対応し、自衛隊がこれをモニターしている。国民の南西諸島の防衛、台湾有事に対する危機感は強くなっている。サイバー戦では全体的に危機意識が薄い一方、日本も攻撃的サイバー戦を行うとしているがこれに対する大きな反論も出ていない。科学技術の保全に関しては学術界の反

軍事的指向や中国寄りの言動も批判を浴びており、国民の意識が変わり始めた。認知領域を含む情報戦という概念が国家安全保障に登場し、防衛白書でも認知領域の戦いについて取り上げている。これは国民の意識の最も大きな変化の一つであり注目すべきところである。

総じてここ数年でグレーゾーンの戦いに関する国民の意識は大きく変わり、ややリベラルよりであったマスメディアの論調も変わった。中国によるグレーゾーンの戦いの日本への影響の程度は限定されたものになってきている。

日本は、中国のグレーゾーンの行動に対し、柔軟に選択される抑止策（FDO）を行い世界に戦略的視点での発信（SC）で対応している。日本は中国に対し防御するのみでなく、より積極的かつ主動的なグレーゾーンの戦いを挑む時代になっているのではないか。

Definition and forms of Gray Zone operations

According to the Defense White Paper¹, gray zones refer to a wide range of situations that are neither pure peacetime nor wartime, and are defined as situations in which a hostile military

¹ 2023 Defense White Paper issued by Japanese Government, p. 33

The Impact of China's Gray Zone Operations on Japan

organization takes action within a range that does not amount to the use of force. What can happen in a gray zone situation is an operation carried out by various military and non-military means, including military threats, exercises, intrusions into territorial airspace and territorial waters, and influence operations through cyber- attacks and dissemination of false information on the internet and media.

In other words, it will be a hybrid operation. All actions other than killing or destroying through the use of physical destructive force (Non-Kinetic Warfare) must be considered gray zone operation. It includes trying to influence the other party through all elements such as diplomacy, military, economy, and information. Ultimately, a major element in gray zone operation is a warfare in the cognitive realm, aiming to influence the opponent's psychology, thoughts, and will. Based on this definition, we can say that we are already in the middle of a gray zone operation.

The challenges of responding to Gray Zone operations

Currently, many countries avoid resolving international disputes by force. In other words, since they are acting on the premise of avoiding a full-scale armed conflict, they are trying to achieve effectiveness within the category of operation in a gray zone situation. Some countries will not hesitate to use full-scale military force if necessary, but we must expect that they will engage in gray zone operations as a preliminary step to that war.

However, in Japan, the Self-Defense Forces are only able to take military action after being ordered Defense Mobilization to defend Japan in the event of an armed attack against Japan. Before that, the Self-Defense Forces will not be able to exercise any more force than the police and Japan Coast Guard in law enforcement. Furthermore, since a Defense Mobilization assumes all-out war, ordering a defense deployment means announcing to the entire world that Japan is entering a state of war, and it is politically difficult to order Defense Mobilization early enough. Moreover, Japan's basic defense policy is "exclusive defense posture," which is the concept of using defensive power only after receiving an armed attack from the

enemy, and limiting it to the minimum necessary for self-defense.

Because it is passive in this way, it can create a mentality of responding to the opponent's actions at a lower level even in gray zone operation. Of course, there is a fear that a premature and excessive response could give the other country an excuse for further escalation. Furthermore, gray zone operations are hybrid warfare, and cyberattacks on private finance, communications, and transportation infrastructure, as well as information warfare that includes the cognitive domain and targets mass media and academia, are also extremely important in gray zone operation.

It is a part. Not only the diplomacy and military, which has been the main element of security up until now, but also all administrative agencies not directly involved in security will become parties to the battle. Furthermore, it is assumed that the gray zone is not an emergency, and must be dealt with within the peacetime legal system, which would require an extremely difficult response for the Self-Defense Forces, making it possible to take immediate action to exercise the right of self-

defense in the gray zone. There is a need for legal reforms to make this possible.

Dramatic change in Japan's View of Gray Zone situations

After the war, Japan has been building its defense capabilities based on an extremely restrained defense policy. However, after the end of the Cold War, Japan became concerned about the expansion of the military power of China and North Korea, and gradually made efforts to build a realistic defense system. Reforms have been made such as acceptance of the right of collective self-defense and stipulations regarding existential crisis situations based on this. However, legislation to deal with the gray zone was postponed, and the so-called right of minor use of force was not sufficiently discussed.

Until 2022, gray zone situations were considered to include violations of territorial waters and airspace by China and Russia, submerged navigation by Chinese submarines, and illegal actions by Chinese government vessels around the Senkaku Islands, and were thought to be even more likely. This included the illegal landing of Chinese maritime militia on the Senkaku

The Impact of China's Gray Zone Operations on Japan Islands or the Nansei Islands. However, in December of last year, the so-called Three Security Documents, the National Security Strategy, the National Defense Strategy, and the Defense Power Development Plan, were released, and what attracted a lot of attention was their description of gray zone operation as well as the building of counterattack capabilities.

The National Security Strategy includes an item to “more effort to create effective system to protect our country in all directions without any gap” and “the boundaries between military and non-military, wartime and peacetime has become unclear, hybrid warfare is being developed, and gray In the current security environment where zone situations are constantly occurring, we are promoting cross-government policies in a wide range of fields such as cyberspace, oceans, outer space, technology, information, and ensuring the safety of people at home and abroad. “We will protect our country's national interests without fail.” The following items are gray zone operations that Japan should respond to.

- 1 Responding to violations of territorial waters and airspace, violations of sovereignty, and threats of military force.

2 Improving response capabilities in the field of cyber security

3 Promoting maritime security and strengthening maritime security capabilities

4 Strengthening comprehensive efforts regarding space security

5 Improving technological capabilities, utilizing research results in the security field, and public-private collaboration

6 Strengthening information capabilities for the security of our country

7 Strengthening the system for protection of people and protecting Japanese nationals living overseas

8 Securing resources essential for security such as energy and food

9 Promoting economic security policies to achieve independent economic prosperity

10 Maintaining and strengthening the international economic order

Most of these matters are handled by ministries other than the Ministry of Defense during peacetime, and all ministries and agencies are parties to security matters in the gray zone. It can

be said that the perception of security has changed significantly. For example, in the section on strengthening intelligence capabilities, there is a reference to security clearance in the field of economic security, indicating that the term intelligence is not just for military-diplomatic relations. There is also a description of strengthening the ability to respond to information warfare in the cognitive domain, including the spread of false information, clearly establishing the concept of warfare in the cognitive domain. These are the ideas described in the Three Security Documents.

Although the Three Security Documents were an extension of the successive reform of traditional security measures into realistic ones, the fact, Russia's invasion of Ukraine had such a big impact on the security sense of the Japanese people is that no doubt. We have seen a nuclear-armed nation, a permanent member of the United Nations Security Council, invade other countries. They were shocked to see that what they thought was impossible for a so-called developed country to take military action actually happened. China, also a permanent member of the United Nations and a nuclear-armed state, does not deny the

use of military force against Taiwan. In the United States, there is also talk of a 2027 invasion of Taiwan.

Even in Japan, it is not necessarily the case that the mass media will make a fuss over Prime Minister Abe's words that "the Taiwanese emergency is a Japanese emergency."² Many Japanese companies are withdrawing from China due to recent economic situation like China's real estate recession and tightening the control towards Japanese business, so called China risks. The much stronger sense of wariness toward China is having a major impact on public opinion regarding Japan's security, especially gray zone operations.

Japan's response to China's Gray Zone operations

At the moment, many people in Japan recognize that it is peacetime, but according to the definition of a gray zone, the current situation is not pure peacetime, but is already a gray zone situation. In other words, a hybrid warfare based on the unified will of the nation has already begun. Below, I will discuss Japan's response and the feelings of its people.

1 China's violation of territorial waters and airspace, acts of violation of sovereignty, and threats of military force

² Presented by PM Abe participated in on-line Symposium in Taiwan on 1st Dec. 2021

On the occasion of U.S. House of Representatives Speaker Nancy Pelosi's visit to Taiwan, China conducted large-scale military exercises around Taiwan, and five ballistic missiles fired on August 4 landed within Japan's EEZ. Although the government did not express strong opposition to this, the media reported that "China has itself informed the Japanese people that the Taiwan emergency is a Japanese emergency." This seems to have significantly changed the Japanese people's awareness of China.

The Self-Defense Forces actively engages in joint training, exercises, and destroyers port calls overseas with not only the United States, but also Australia, France, and the United Kingdom, and integrates these activities into diplomatic relations as "strategic communications" (SC). We are actively disseminating the results of joint training and exercises.

In addition, we will constantly collect information, conduct surveillance, and reconnaissance around Japan, as well as exchange information between Japan and the United States. It would allow us to flexibly respond to air defense, missile defense, non-combatant evacuation, and respond to armed attacks, depending on the situation by "Flexible Deterrent

Operation (FDO)” to prevent the situation from occurring or becoming more serious.

Additionally, while the Japan Coast Guard works directly with the Chinese Coast Guard to protect its sovereignty around the Senkaku Islands, the Japan Maritime Self-Defense Force also works closely with the Japan Coast Guard to back up the Coast Guard. In 2004, the Japan Maritime Self-Defense Force pursued a submerged submarine that had intruded into territorial waters off the Nansei Islands, but the submarine was evacuated into international waters. In 2018, a submerged submarine was confirmed in the waters off the coast of the Senkaku Islands, and active sonar was used to track it, and in one case, the submarine surfaced on the high seas, raising the Chinese flag. These would also be examples of FOD. Many people are aware that China will take some kind of military action against the Senkaku Islands in the event of a Taiwanese emergency.

2 Improving response capabilities in the field of cyber security

Cybersecurity is also an issue that affects the trust between Japan and the United States, and the Japanese government has established the Cabinet Secretariat Cybersecurity Center and is

working with various ministries and agencies to improve response capabilities. The Ministry of Defense will also establish a cyber unit in 2022 and expand the number of cyber-related units to approximately 4,000 people by 2027. We also trained personnel engaged in cyber-related work such as system procurement and maintenance operations, and trained approximately 20,000 people.

Most notable is the introduction of the concept of active cyber defense in gray zone. In cyber warfare, pure defense and barriers are not enough; in the case of serious cyber-attacks, it is necessary to infiltrate the attacker's servers and render them harmless.³ Although it is still in the stage of considering legal support, the declaration that it will take cyber-attack methods if necessary is a major change and is a message for deterrence in cyberspace. On August 7, 2023, the Washington Post published an article stating that Japan's Ministry of Defense had been subjected to a cyber-attack by a Chinese People's Liberation

³ "Japan to quadruple cyber defense forces, meeting threats head-on," *Nikkei Asia*, January 5, 2023, <https://asia.nikkei.com/Politics/Japan-to-quadruple-cyber-defense-forces-meeting-threats-head-on> ; "Cyber Defense: Do Everything Possible to Strengthen Japan's Fragile Systems," *The Japan Times*, January 21, 2024, <<https://japannews.yomiuri.co.jp/editorial/yomiuri-editorial/20240121-163611/>>

Army hacker group, and it was picked up by mass media in Japan as well.

In response, the government gave a vague comment, saying, “We have not confirmed that the Ministry of Defense’s confidential information was leaked as a result of a cyber- attack.” Although this made the public aware that the Chinese military was conducting a cyber- attack against the Ministry of Defense, there was not much of a reaction. The problem seems to be Japan’s low sense of crisis and slow reaction by the Government of Japan regarding cyber- attacks.

3 China’s outstanding opposition to the release of treated water from TEPCO’s Fukushima Daiichi Nuclear Power Plant

Based on the government’s decision, TEPCO began discharging cooling water from the Fukushima nuclear power plant on August 24 after treating it to render it harmless. The treated water is released in a scientifically-based and safe manner, and the International Atomic Energy Agency (IAEA) concluded in a report that it “meets international safety standards.”

The level of tritium remaining in the treated water is far lower than that in the nuclear power plant cooling water released

The Impact of China's Gray Zone Operations on Japan

by various countries. We also actively provide explanations to countries around the world and strive to gain their understanding. However, China calls the treated water “nuclear contaminated water” and criticizes Japan, calling it “a serious problem affecting the safety of the marine environment and human life and health,” ignoring scientific evidence. It also completely banned the import of Japanese marine products.⁴ Scallops produced in Hokkaido are most affected, but many are processed in China and exported to the United States.

Therefore, the United States is proposing and building a system in which the products are exported to Southeast Asia, processed, and then purchased by the United States.⁵ In addition, Chinese fishermen who fish in the same waters will also suffer damage to the Chinese economy, including the restaurant industry and Chinese processing companies, if consumption of seafood in China decreases. Additionally, there has been a rapid increase international calls from numbers starting with 86 regarding the release of treated water, that is, slanderous calls from China to Japan. Of course, the Chinese authorities are aware of this fact, but they are ignoring it. Even at ASEAN-

⁴ Sankei Shinbun, August 25, 2023.

⁵ Nihon Keizai Shinbun, September 24, 2023, <<https://www.nikkei.com>>

related summit meetings and the G20 summit in India, China's claims regarding treated water did not receive support. China's prominent attitude has sparked a backlash against China within Japan. In the past, China has used political cards against Japan, such as history issues and textbook issues, even though it is recognized as unreasonable statements, Japan has not strongly objected and has responded in a way that does not provoke China.

However, with Russia's invasion of Ukraine, public opinion in Japan changed dramatically, and a sense of wariness toward China increased, and the Japanese people began to understand that a soft policy would not work against China. If it were years ago, Japan's total embargo on seafood products would have been a source of criticism toward government by Japanese opposition parties, and it would not have been surprising if there was a chorus of voices in the media against the release of treated water. But in this time, both the opposition parties and the media are extremely calm, and their cold voices toward China are louder. Additionally, Toshi Yoshihara of the US Graduate School of Japan Policy Studies said, "China's recent measures are a gift to Japan. We can take this as an opportunity to correct the situation," was also reported in a

The Impact of China's Gray Zone Operations on Japan
Japanese newspaper.⁶ Even if they don't take it that seriously, there are probably few Japanese people who think that China is criticizing Japan based on purely scientific grounds. Still, some opposition members of parliament are following in the footsteps of China in attacking the government using the phrase “contaminated water,” and the media is also critical of this.

In the past, whenever China said something, the opposition parties and the media would all take advantage of it and criticize the government, but now the general public is wary of China, and they no longer accept China's political statements unilaterally. The current issue of China embargoing seafood products from Japan will only heighten distrust towards China and will not benefit China's national interests.

4 Improving technological capabilities, utilizing research results in the security field, and public-private collaboration

In 2020, Prime Minister Suga refused to appoint 6 persons of the 105 new members of the Science Council of Japan⁷ (hereinafter referred to as the Science Council), sparking debate about the Science Council. The Science Council is run using the national budget and is under the jurisdiction of the Prime

⁶ Sankei Shinbun, September 18 2023

⁷ *Science Council of Japan*, <<https://www.scj.go.jp>>

Minister, but as an independent special institution expected to promote scientific progress and make recommendations to the government from a scientific standpoint.

However, since its founding in 1949, the Science Council has consistently opposed military-related research, and has viewed research commissioned by the Ministry of Defense as problematic and excluded it. At present, it is difficult to distinguish between national security and civilian research, and there has been criticism of the Science Council's stance. The government was also trying to reform the Science Council. It is unclear whether the Science Council responded to such criticism, but in 2022 it issued an opinion that effectively allows research into dual-use technology. This result may also be a factor, but this year the number of applications for the "Security Technology Research Promotion System," which allocates the Defense Equipment Agency's budget to universities and public research institutes, has doubled compared to last year. Recently, the pace of progress in cutting-edge science and technology has been remarkable, and it is important for Japan to secure a leading position through public-private cooperation by having cutting-

edge technology that meets the needs of the Ministry of Defense. The current Science Council's actions will accelerate this.

The Science Council's anti-military stance can be said to be a vestige of the cognitive warfare waged by the United States against Japan during its occupation policy after Japan's defeat in the war, but unless these are gradually improved, it will become a weakness that can be exploited by China. From August 24, 2023, we began releasing treated water that has been made safer from the cooling water associated with the Fukushima nuclear power plant accident. In response, China is promoting blatant propaganda by labeling this treated water as "nuclear contaminated water" and ignoring scientific evidence. In response, criticism has been raised that the Science Council, which is funded by taxpayers, has not provided any counterargument from a scientific perspective.⁸

5 Strengthening the posture for protecting citizens

The Civil Protection Act has existed for a long time, and is under the jurisdiction of the Ministry of Internal Affairs and Communications, with each local government creating a civil protection plan. The content was broadly based on the idea of

⁸ Sankei Shinbun, September 4, 2023.

evacuation by going to a safe evacuation center and further away from the war zone. However, although it has become common knowledge that the Nansei Islands would be affected by a Taiwanese emergency, they are remote islands and cannot be easily evacuated.

After witnessing missile attacks and what happens to civilians under enemy control during the Russia-Ukraine war, the need to build evacuation shelters on islands that cannot be easily evacuated was recognized. First, in July of this year, Chief Cabinet Secretary Matsuno announced his intention to consider building shelters in Ishigaki City (Ishigaki Island), Okinawa Prefecture, to protect residents of the Nansei Islands. If it were few years ago, when someone had said something like building a shelter, there would have been an uproar in the mass media and elsewhere, with people wondering if the government was planning to go to war or if they should use diplomacy to prevent a war. Currently, efforts are being made to establish a domestic system with such emergencies in mind, and public awareness is undergoing a major change.

6 Preparation for information warfare including the cognitive domain

“It is better than anything that you make the opponent force to submit without a fight.” This is a famous quote from the Art of War by Sun Tzu. “The 2023 China Security Report: China Aims to Control Cognitive Domains and Gray Zone Situations” published by the National Institute for Defense Studies states that “If the U.S. military intervenes in the event of a Taiwan Strait incident, the People’s Liberation Army’s invasion of Taiwan will be significantly difficult. Taiwan is aware that China is aiming for a strategy of ‘winning without fighting,’ and that cognitive warfare is being carried out as one of the means to achieve this.”⁹

The term “cognitive warfare” does not appear at all in the 2021 Japan’s Defense White Paper. Even in the 2022 Defense White Paper, it only appeared about five times in explanations of the situation in Taiwan, and did not appear on pages related to Japan’s defense. This year’s 2023 “Defense White Paper” show up the term “cognitive domain” on eight pages, including an introduction to Taiwan’s cognitive warfare as well as sections

⁹ “China Security Report 2023” *National Institute for Defense Studies of Japan*, <nids.mod.go.jp>

on Japan's own defense system. In other words, it can be said that over the past three years, Japan's view of security has changed dramatically about the perspective of cognitive warfare and information warfare related to the cognitive domain. The reason why the term "cognitive domain" appeared in this year's defense white paper is because the Three Security Documents position it as information warfare that includes the cognitive domain, and it also describes how the Ministry of Defense will be involved.

In 2003, China's People's Liberation Army Work Regulations introduced three types of warfare: public opinion warfare, psychological warfare, and legal warfare, and concepts such as "Unrestricted Warfare" were announced, and many years later, Japan finally responded to this. The strategic rationale for doing so was presented. It is noteworthy that this concept of "cognitive domain" appeared in the "National Security Strategy". New cognitive domains have been added to the land, sea, air, space, cyber, and electromagnetic domains. When it comes to working on the cognitive domain, all spaces and domains, and all inputs and stimuli for all actions in social life, become subject to evaluation and analysis from the

The Impact of China's Gray Zone Operations on Japan

perspective of information warfare on the cognitive domain. All actions, including not only diplomacy and military affairs but also economics, cultural exchange, academic exchange, etc., need to be viewed from the perspective of a battle in the cognitive domain.

If the government would budget, organize, and improve its posture, its effectiveness is not guaranteed without each citizen's recognition on cognitive warfare. It is unfortunate that Japanese people have to break away from their belief that human being is inherently good. The average Japanese do not want to think of the actions of others as coming from malicious intent, but at least the international community, especially China, has to break away from this. This is probably the time when we must be cautious when it comes to things involving the world. It is natural that cognitive warfare is carried out not only in gray zones, but also in all situations of battle, from peacetime to during the use of force in emergencies. However, if the People's Liberation Army's aim is to win before an armed conflict, then fighting in the cognitive realm is more important during peacetime and in the gray zone. In a democratic country like Japan, public opinion holds great power. In the international

community, even before a conflict has occurred, by using disinformation and strategic information dissemination to influence public opinion and decision-making in other countries, and by limiting the influence on one's own decision-making, Emphasis is placed on information warfare, which aims to create a security environment advantageous to itself.

Cognitive warfare is a type of warfare that does not use physical force (Non-Kinetic Warfare), and although it does not involve killing people or destroying resources, given that war is a conflict between wills, it directly affects their wills. It can also be called a fundamental battle. The battle in the cognitive domain is by no means a new concept, but with the rapid development of information technology, it is a way of fighting that can have great influence. Information warfare in the cognitive domain is more intense in the internet society than in the mass media. In 2022 “Japan Fact-check Center”¹⁰ was established within the “Safer Internet Association” as an organization to take measures against misinformation and disinformation on the internet. However, this center has been

¹⁰ Japan Fact-check Center (JFC) is a non-profit organization specializing in fact-checking. Our aim is to maintain and improve the integrity of the Internet speech space, which is the foundation of democracy. <factcheckcenter.jp>

The Impact of China's Gray Zone Operations on Japan

criticized for targeting information on the Internet only, and excluding information from media such as newspapers and television. Furthermore, looking at past fact-checking results, there are some conclusions are not always convincing, and there are concerns as to whether it will still function adequately. The Ministry of Defense states that the Intelligence Headquarters will be responsible for the core of responding to information warfare, including the cognitive domain, and that the Ministry as a whole will develop information capabilities that can reliably respond by 2027.

We will use AI to collect, analyze, and disseminate public information, including determining the truth or falsehood of information disseminated by foreign countries and fact-checking, as well as sharing information and conducting joint training with allies and like-minded countries. We will strive to strengthen our abilities by doing so. For Japan, preparations for the battle in the cognitive domain have only just begun, and as a system it is as if nothing has been done yet. However, the three security documents recognize its importance, and the Ministry of Defense only describes it as a future measure. However, it is significant that we were able to recognize its importance.

Conclusion

Currently, Japan as a whole is undergoing a major change in its mindset regarding gray zone operations. Russia's invasion of Ukraine was a major turning point, and at the same time China led by Xi Jinping appears to overlap with Putin's Russia, and there is a growing sense of wariness toward China among the people. Japan conducted a surprise attack on Pearl Harbor in Hawaii in December 1941, inflicting heavy damage on the U.S. Pacific Fleet, aiming to shift the balance of naval forces in the Pacific to its advantage, and also to demoralize the United States.

Tactically, it dealt a major blow to the battleships at Pearl Harbor, but it inflamed the hostility of the American people and was a huge failure strategically and from a cognitive warfare perspective. There could have been other ways to reduce the American people's will to fight. Almost all of China's actions can be understood as an operation in a gray area, a cognitive realm, with political meaning. If these things pile up and create a negative image in Japanese people's perception of China, the result could be the same as Japan's attack on Pearl Harbor.

I think Japanese people have also begun to realize that we live in an age where each individual must think and judge for

themselves the truth or falsehood of information. Deputy Governor Aso, who visited Taiwan in August, gave a speech saying, “There has never been a time when like-minded countries, including Japan, Taiwan, and the United States, are required to be prepared to exercise extremely strong deterrence.” “Allied nations, including Japan, Taiwan, and the United States, are required to be prepared to put strong deterrent forces to work.

Mind for ready to fight is necessary. It is not enough to just spend money and have defense capabilities. Use it when the time comes. For the defense of Taiwan. It conveys to the other party our intention to use it to stabilize the Taiwan Strait, and that serves as a deterrent.”¹¹ Surprisingly, although some opposition leaders made critical statements in response to this, there was no major backlash from the mass media or the general public. This would have been unthinkable a few years ago, and even Mr. Aso would not have been able to make such a statement in the first place. This means that Japan's current perspective on security has changed, and it has begun to feel a sense of crisis that China, North Korea, and other countries may suddenly start a war.

¹¹ *The Sankei News*, August 8 2023, <sankei.com>

Japan take Flexible Deterrence Options(FDO) and Strategic Communication(SC) as a part of measures to meet China's operations. FDO includes Joint training and exercises with allied nations at various places. SC is important and appropriate means for Japan now.

However, Japan should initiate proactive gray zone operation offensively little by little not only protect and react to Chinese operations.

China's Vision of the Russian-Ukrainian War in Light of Its Future Military Actions against Taiwan

Yurii Poita ^I

(Head of the Asia-Pacific Section at the Center for Army, Conversion and Disarmament Studies (CACDS) in Kyiv)

Abstract

China shows reluctance to condemn the Russian invasion of Ukraine, accuses NATO of provoking the “Ukrainian crisis”, and provides significant economic, financial, technological and informational support to Russia. This demonstrates China's interest in Russia's military victory over Ukraine, which will give Beijing strategic advantages in countering the West. In addition, China is studying the course and results of the Russian-

^I Mr. Yurii Poita is a Head of the Asia-Pacific Section at the Center for Army, Conversion and Disarmament Studies (CACDS) in Kyiv, European China Policy Fellow at Mercator Institute for China Studies (MERICS, Germany), Visiting Research Fellow at the Institute for National Defense and Security Research (INDSR, Taiwan), PhD Candidate at the Al-Farabi Kazakh National University. Yurii Poita specializes in China's influence in the post-Soviet space, Ukrainian-Chinese relations, China's factor in Russian-Ukrainian war, hybrid and conventional warfare. Phone number: +380638676210, email address: yuriipoita2@gmail.com

Ukrainian war from the point of view of its future military operation against Taiwan in military, international and domestic political aspects.

This article is aimed at researching the Chinese interpretation of the Russian-Ukrainian war in relation to its future actions against Taiwan. The article used the methodology of discourse analysis based on the results of a series of discussions with Chinese experts affiliated with the government. The key findings are that the Russian-Ukrainian war is perceived by China as a partial model for a future military operation against Taiwan, ensuring its own political stability and finding effective tools to pressure the West.

Keywords: Russian-Ukrainian war, China, Taiwan

Introduction

The Russian-Ukrainian full-scale war became for China an important source of information and assessments regarding the possibility and ways of achieving its own geopolitical objectives; building the military potential of the PLA;¹ reducing the possibility of external influence from the West; the effectiveness of the strategic deterrence system, including missile and nuclear; readiness of Western countries to consolidate and provide assistance to their partners.

China, which declares “reunification” with Taiwan as one of its historical tasks, while not excluding the military methods, probably evaluates the Russian-Ukrainian war from the point of view of its future strategy to seize the island. It is currently impossible to say whether China will make such a decision and its timing, and most experts believe that China’s most likely actions will be “gray zone operations” and “salami-slicing,”² but

¹ Evan A. Feigenbaum & Charles Hooper, “What the Chinese Army is learning from Russia’s Ukraine war,” *Carnegie Endowment for International Peace*, July 21, 2022, <https://carnegieendowment.org/2022/07/21/what-chinese-army-is-learning-from-russia-s-ukraine-war-pub-87552>.

² Tobias Burgers & Scott N. Romaniuk, “China’s real takeaway from the war in Ukraine: Grey zone conflict is best,” *The Diplomat*, October 6, 2022, <https://thediplomat.com/2022/10/chinas-real-takeaway-from-the-war-in-ukraine-grey-zone-conflict-is-best/>.

China is also actively preparing for a war scenario. And the results of the Russian-Ukrainian war are also important for Chinese strategic calculations.³

The military domain issues, that are the focus of China's attention, include: the application of various military means, tactics and strategy on the battlefield, Command and Control, support and logistics. The importance for Beijing of correct assessments is that China, being under the arms embargo of the US and the EU, has built its military potential on the basis of Soviet and Russian weapons. In this aspect, the significant losses of the Russian army on the battlefield, the ineffectiveness of military command, as well as the significant advantages of Western military technologies over Russian counterparts, are obviously a negative surprise for China, which may be repeated in the event of an attack by the PLA on Taiwan.⁴

³ "Military and Security Developments Involving the People's Republic of China," *U.S. Department of Defense*, October 19, 2023, <https://media.defense.gov/2023/Oct/19/2003323409/-1/-1/1/2023-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>

⁴ Tai Ming Cheung, "Russia's Ukraine disaster exposes China's military weakness," *Foreign Policy*, October 24, 2022, <https://foreignpolicy.com/2022/10/24/russias-ukraine-disaster-exposes-chinas-military-weakness/>.

Many researchers have written articles and reports on these topics. In April 2022, Thomas Corbett, Ma Xiu and Peter Singer wrote that China is likely to consider the utility of unmanned systems in high-intensity conflict; the need to carry out reforms of the PLA, and conduct joint and combined armed operations and joint exercises; the need to improve the military training system; the importance of stepping up efforts in cyber/information warfare as well as encrypted communications; the need to fight corruption, especially in the field of logistics; the importance of protection against sanctions, including within the framework of “Dual Circulation” and promotion of its cross-border interbank payment system.⁵

In July 2022, Evan Feigenbaum and Charles Hooper drew attention to the fact that China will learn lessons on issues of combat command, deterrence, and the separation of the political and combat functions of the PLA.⁶

Then, in February 2023, Evan Feigenbaum and Adam Szubin, in an article in *Foreign Affairs*, pointed out that China is

⁵ Thomas Corbett, Ma Xiu, & Peter W. Singer, “What Is China Learning from the Ukraine War?” *Defense One*, April 4, 2022, <https://www.defenseone.com/ideas/2022/04/what-lessons-china-taking-ukraine-war/363915/>.

⁶ Evan A. Feigenbaum & Charles Hooper, “What the Chinese Army is learning from Russia’s Ukraine war,”

learning the lessons of applying sanctions against Russia to reduce their leverage over China in the event of a war against Taiwan; in addition, China was surprised by the unity of the West and the willingness to take significant national and global risks and economic losses for the sake of helping Ukraine. Also, China understood the importance of coalitions, so it intensified its diplomatic work with other countries.⁷

In June 2023, the Atlantic Council published a report by John Culver and Sarah Kirchberger that offers other useful insights. They assume that Beijing assesses the West's reaction to the Russian war against Ukraine as a "trajectory to pursue overthrow of the CCP as a strategic goal"; Russia's nuclear blackmail was effective and deterred the West, so China may use a similar approach during the war against Taiwan; against the background of Russia's military losses, China may prefer non-military or less decisive options to coerce Taiwan; the disruption of Russian aggression will strengthen China's deterrence over Taiwan.⁸

⁷ Evan A. Feigenbaum & Adam Szubin, "What China has learned from the Ukraine War," *Foreign Affairs*, February 14, 2023, <https://www.foreignaffairs.com/china/what-china-has-learned-ukraine-war>.

⁸ John K. Culver & Sarah Kirchberger, "US-China lessons from Ukraine: Fueling more dangerous Taiwan tensions," *Atlantic Council*, June 15, 2023, <https://www.atlanticcouncil.org/in-depth-research-reports/report/us-china->

In July 2023, Gabriel Dominguez suggested that China will prepare its economy for Western sanctions in the event of an invasion of Taiwan. China's other takeaway from Ukraine is that the US and its allies are likely to intervene in Taiwan conflict, although it's unclear exactly how. Also, China may come to believe that the use of force in the region may be difficult, expensive, and unpredictable, and that this may require more effective military training.⁹

In July 2023, based on 30 off-the-record interviews with Chinese thinkers and strategists, Alicja Bachulska and Mark Leonard from the European Council on Foreign Relations (ECFR) came to conclusion that in the international aspect, China evaluates the West's reaction to the Russian invasion, its consolidation, the effect of Western sanctions on the Russian economy, which can lead to the development of ways to strengthen the resilience of the Chinese own economic and technological system against external influences.¹⁰

lessons-from-ukraine/.

⁹ Gabriel Dominguez, "China draws geopolitical lessons as Ukraine war grinds on," *The Japan Times*, July 23, 2023, <https://www.japantimes.co.jp/news/2023/07/23/asia-pacific/china-geopolitics-russia-ukraine-war/>.

¹⁰ Alicja Bachulska & Mark Leonard, "China and Ukraine: The Chinese debate about Russia's war," *ECFR*, July 11, 2023,

Finally, the last but not least research by Mick Ryan in September 2023 in *Futura Doctrina* suggests that China will carefully develop its strategy - both militarily and internationally, as well as sustaining and expanding, if necessary, an industrial base to ensure war. Another issue for China may be Western decision-making about the war, and what capabilities deterred the West from escalating its support or intervening. Third, given the statements of the Chinese ambassador to France about re-educating the Taiwanese after any Chinese invasion, it is expected that China will not back down from such brutality as shown by Russia against the Ukrainian people. A fourth conclusion for China may be the need to distract the US, Japan, regional partners and Europe in order to delay their intervention as long as possible. Fifth, China will study more carefully ways to demoralize and undermine the fighting spirit of the Taiwanese. Also, as in the authors above, Mick Ryan believes that China will expand its nuclear arsenal in order to prevent or significantly reduce aid to Taiwan from the West through nuclear blackmail. China's other efforts could be to increase its proficiency in conducting joint operations; improving the

<https://ecfr.eu/publication/china-and-ukraine-the-chinese-debate-about-russias-war-and-its-meaning-for-the-world/>.

quality of military education; the ability to adapt on the battlefield and in technology, preventing the Taiwanese leadership from achieving a high level of leadership.¹¹

It is obvious that understanding how China interprets the causes, course and prospects of the Russian-Ukrainian war, what lessons China learns and what conclusions it draws, can provide insight into its future strategy regarding the seizure of Taiwan. At the same time, most of the articles mentioned above, with the exception of some, are not based on direct communication with the Chinese side. Therefore, discussions with Chinese international and military experts are necessary to confirm or refute the above-mentioned lessons of China, as well as to find new ones.

The basis of the methodology is: discourse and content analysis of the statements of Chinese experts during a series of closed-door discussions organized by the Kyiv-based Center for Army, Conversion and Disarmament Studies (CACDS) in May, June and November 2022.

Results

¹¹ Mick Ryan, “What China is Learning from the Ukraine War,” *Futura Doctrina*, September 5, 2023, <https://mickryan.substack.com/p/what-china-is-learning-from-the-ukraine>.

Despite some restraint of the Chinese side during the mentions discussions, their individual theses differ from the official position of Beijing, which can give more insights on how China actually could see the development and consequences of the war. The analysis of what Chinese experts emphasized, what they focused on, what semantic constructions they used, and what, on the contrary, they were reluctant to say – shed some lights on conclusions that China draws from the war and how its conclusions would influence possible actions against Taiwan.

Experts involved are high-ranking thinkers from leading Chinese institutes and think-tanks that are directly affiliated with the government, suggesting that the viewpoint expressed by them is dominant in the Chinese expert environment, close to the decision-makers, and used to prepare the reports and proposals to the Chinese leadership. Due to the fact that the discussions were held behind closed doors and according to the principle of Chatham House, the affiliation and surnames are not disclosed.

During the discussions, experts on both international issues and military and security specialists were present, for example, the head of one of the delegations had the military rank of reserve major general, and some experts were ex-military

attachés in post-Soviet countries. This gives an opportunity to assess how China sees the international situation and the situation on the battlefield. In addition, discussions were held in May, June and November 2022, providing an opportunity to examine how Chinese assessments have changed over time and against the backdrop of key developments on the battlefield and in the international environment.

The results of the discussions show that the Chinese side pays attention to the strategic planning, military, economic, and informational aspects of the Russian-Ukrainian war, and their theses, conclusions, and questions demonstrate that China assesses the Russian-Ukrainian war in terms of its future military operation against Taiwan.

Let's look into the key theses of Chinese specialists in relation to strategic calculations, the situation on the battlefield and the international landscape.

Thesis 1 - The war was a mistake, but the mistake is Russia's inefficiency

During a discussion in May 2022, Chinese experts noted that there is a growing view in Chinese thinkers circles that "Russia made a major mistake by invading," "the war has failed

and is too expensive.” But the fallacy of Russia’s actions lies not in the fact that Russia started a war against Ukraine, but in the fact that Russia cannot win it, because it failed strategic military planning, incorrectly assessed the Ukrainian Armed Forces and society’s readiness for defense, as a result of which it suffered significant losses on battlefield

This interpretation suggests that China was not opposed to the Russian invasion in general, but expressed frustration with Russia’s military failures and the subsequent consequences. This allows us to conclude that China is interested in the military defeat of Ukraine, which would significantly weaken the international image of the United States, undermine Washington’s position in Europe, and provide an opportunity to drive a wedge between allies, including in the Indo-Pacific region. The thesis “yesterday - Afghanistan, today - Ukraine, tomorrow – Taiwan” would become dominant in the Chinese information war and could undermine the faith of the allies in the readiness of the US to provide assistance, incline part of the society and the political leadership of the Indo-Pacific countries to make concessions, including regarding claims China to Taiwan. The theses that the US “betrayed and abandoned its

partners,” that the war was caused by an unwillingness to listen to Russia’s “legitimate interests,” and that it is better to find consensus and make concessions to authoritarian leaders than to fight, would become dominant in the media and political discourse.

In addition, this understanding of the situation by China indicates that it generally justifies the military way of resolving conflicts, even contrary to the international law, and in relation to a sovereign state. This gives reason to conclude that the statements of the political leadership of China regarding the possibility of a military way of “reunification” with Taiwan are not just political statements, but are based on full faith in their possibility and expediency. The question is that it is necessary to better prepare and conduct a completely successful operation and exclude the possibility of strategic miscalculations.

Thesis 2 - War was inevitable, and the same situation with Taiwan

The second important thesis during the same discussion was that, according to Chinese experts, war with Russia was inevitable, since Russia was “excluded by the West from the European security system, felt humiliated, was under constant

pressure from NATO, and was forced to defend their legitimate national interests”. In this regard, Chinese experts said that China sympathizes with Russia, feels affection for its policy and compares it with a similar situation in China. The dominant point of view is that “the West is the center of the global order, China and Russia have gained a lot from cooperation with the West, but both Russia and China feel insulted and humiliated because they do not have a sufficient role in the world, they feel excluded and ignored.” When asked whether this means that the war against Taiwan is also irreversible, no clear answer from China’s side was received, however, comparing one’s situation with Russia, feeling and cultivating national humiliation can form a sense of inevitability of “reunification” with Taiwan, including by military means. Such sentiments in the Chinese expert environment can be a reflection of the views of the political leadership, and at the same time strengthen them, and ultimately lead to China’s firm belief in the need to resolve the “Taiwan issue” at all costs.

Thesis 3 - Small nations are neither independent nor subject

Despite the fact that after February 24 2022 there were no formal changes in Ukrainian-Chinese relations, during expert discussions, certain signs point to China's disregard for the rights and subjectivity of smaller nations. In particular, Chinese experts have always named the US and Russia as parties to the conflict, thereby ignoring the subjectivity of Ukraine. This can also be confirmed from the questions of the Chinese side, in particular, the experts were interested in the decision-making system in Ukraine during the war, the role of the President of Ukraine Volodymyr Zelenskyi in it and "other important factors for decision-making."

This may indicate that Chinese experts are under the influence of the Russian narrative about "external governance," "the presence of foreign advisers in Ukrainian government," "the lack of independence of Volodymyr Zelenskyi," "subordination of Kyiv to foreign puppeteers" etc. Third, during the discussion about ways to resolve the conflict, Chinese experts noted that "the keys to the conflict are in the US hands" and Washington could resolve it. When asked by the Ukrainian side what this means and how the US can end the conflict, the Chinese side noted that the US is using Ukraine to weaken

Russia, and the duration of the war depends on the US regulating arms supplies. Last but not least, during the discussion of US aid to Ukraine, Chinese experts, saying that the US is trying to finally exhaust Russia using Ukraine, and keep the intensity of the war under its control, drew a parallel with Taiwan, noting that the US “provokes China using Taiwan, creating crises near China, and trying to create a so-called security environment around China, therefore China feels pressure and threats to its territorial integrity.”

In light of the aforementioned discussion, it can be deduced that China’s lack of recognition of Ukraine as a distinct and sovereign nation, coupled with its underestimation of Ukraine’s statehood, parallels its approach to Taiwan. This parallelism may yield several potential consequences:

a) The potential justification of intervention, as China perceives Taiwan to be a pawn of the US.

b) An underestimation of Taiwan’s capacity for resistance in the event of aggression.

c) The assumption that, in case of the absence of US intervention, Taiwan might be susceptible to a relatively straightforward invasion.

Thesis 4 - Military crimes are deemed acceptable and serve as an instrument for gaining a strategic advantage

During discussions, the Ukrainian side has repeatedly focused on the war crimes committed by the Russian armed forces, as well as the atrocities and killings of Ukrainian civilians by Russians, in an attempt to create conditions for China to reconsider its so-called neutral stance. However, Chinese experts have never emphasized humanitarian concerns, instead regarding them as factors capable of altering the international landscape or affecting the readiness of the Ukrainian side to resist. For instance, they have noted that the leakage of information concerning Russian military crimes in Ukraine and its publication in global media significantly altered the international perception of the war and compelled foreign governments to provide assistance to Ukraine. Another example is Russia's deliberate targeting of civilian infrastructure during the winter period, thereby creating a humanitarian catastrophe that could shift the balance of power in favor of the Russian side, undermining Ukrainian resistance and potentially forcing capitulation.

These observations reveal China's apparent indifference to matters of human suffering, the killing of civilians, and even the

potential genocide of an entire nation, all in pursuit of its geopolitical goals. Nevertheless, during military operations, humanitarian considerations may become a pivotal factor in altering the international position. Therefore, military operations should be conducted with minimal information leakage to the global media.

Thesis 5 - The transparency on the battlefield must be eliminated

Chinese experts have emphasized the importance of humanitarian considerations in the conflict, as humanitarian catastrophes can lead to condemnation from the international community and significantly impact the positions of foreign governments and international organizations regarding support or lack thereof for the respective side. Taking this into account, China is likely to seek a change in its approach in future military actions against Taiwan to ensure a swift and less bloody establishment of control over the island.

Secondly, the question of Taiwan's access to internet communications and global media becomes a significant factor. Therefore, in the initial stages, China needs to completely cut off

Taiwan from the international information space. This action serves to:

a) Increase the importance of non-contact means of influence for China, including cyberattacks.

b) Reinforce the priority of blockading the island and isolating it from communication lines (or their physical destruction in the early stages of the conflict) and external contacts (through isolating the island and establishing an A2/AD zone around it).

c) Develop means of electronic jamming or destruction of the Starlink satellite communications system or other equivalent that Taiwan can use in the event of China's cutting of submarine communications cables.

Thesis 6 - Hypersonic missile weapons have proven to be effective, yet ground forces are essential

Chinese experts have underscored the effectiveness of Russia's missile weapons, particularly hypersonic missiles. In November 2022, these experts assessed Russia's increased potential for success through strikes on energy facilities in Ukraine, making Ukrainian resistance considerably more challenging during the winter season. These assessments may

encourage China to engage in negotiations with Russia to acquire technology for producing hypersonic weapons and to gain expertise in overcoming anti-missile defense systems, including those of Western origin.

However, it has become increasingly evident over time that achieving victory with missiles alone is impossible without an effective ground operation that involves “boots on the ground.” As of October 2022, Russia had launched 4,500 cruise and ballistic missiles into Ukrainian territory,¹² with some days witnessing up to 100 missile launches simultaneously. About half of Ukraine’s energy infrastructure had been destroyed. Yet, Russia had failed to reach a turning point in the conflict. The Ukrainian armed forces remained resilient against Russian missile attacks, Ukrainian cities were gradually recovering, the government and society were resolute in not surrendering, Ukrainian defense industries continued to function and develop weaponry, and Western allies of Ukraine were supplying anti-aircraft and anti-missile systems to Kyiv.

¹² Tom Ambrose, “Russia-Ukraine war live: Russia has fired 4,500 missiles on Ukraine since invasion, says Zelenskiy,” *The Guardian*, October 28, 2022, <https://www.theguardian.com/world/live/2022/oct/28/russia-ukraine-war-live-news-updates-joe-biden-vladimir-putin-russian-nuclear-weapons-dirty-bomb-claim?page=with:block-635b8cf98f082fdc8beafd22>

These observations suggest that, despite extensive missile assaults, Russia had not achieved its operational goals. Therefore, China may come to the conclusion that the missile component alone has limited effectiveness. While missiles remain an important element, they are insufficient for achieving military victory. To take Taiwan, the PLA would need to find a way to land its troops on the island and engage in urban warfare. An indicator of a reassessment of the situation could be observed in the combat training of the Ukrainian Armed Forces and their preparation for urban combat scenarios.

Thesis 7 - Understanding the factors behind the enemy's high morale is crucial

Chinese experts have highlighted the substantial advantage enjoyed by the armed forces of Ukraine due to their high morale, which has proven to be a significant factor on the battlefield. In this context, Chinese experts have expressed interest in comprehending the reasons behind the elevated morale of the Ukrainian military, its sustainability, the methods used to achieve it, and the specific aspects of their training that have contributed to shaping the strong morale of Ukrainian soldiers.

This indicates a shift in Chinese experts' perspective regarding the significance of personnel in warfare, focusing on their qualitative attributes. It may lead to China's pursuit of methods and strategies for cultivating and maintaining high and unwavering morale among its own soldiers. In this regard, China is expected to intensify its efforts to gather information about NATO's military training system, which played a role in the preparation of Ukrainian armed forces and is also relevant to the training of Taiwanese armed forces.

Furthermore, China should conduct a more comprehensive examination of the state of Taiwan's armed forces, identifying vulnerabilities in the morale of Taiwanese military personnel. This entails exploring opportunities for exerting informational influence, causing demoralization, and creating disarray on the battlefield with the aim of forcing surrender or defection to the enemy's side.

It is worth noting that a significant outcome of the situation in 2022 was the loyalty of Ukrainian military personnel and generals to their homeland, as they did not defect to Russia, in contrast to the events in Crimea in 2014 where defections were widespread. Russian expectations that Ukrainian generals,

officers, and soldiers would defect did not materialize and have had strategic consequences for Russia, impacting its planning and conduct of the military operation and leading to the overall failure of the campaign. Had Ukrainian generals defected, the situation for Russia could have been significantly more favorable. Consequently, China may intensify its efforts to attract generals and officers from the Taiwanese armed forces, with the aim of potentially swaying part of the armed forces to its side.

Thesis 8 – Putin’s regime is stable and faces no imminent threats

Chinese experts have observed a significant deterioration in the situation within Russia and its surrounding regions. This deterioration is marked by economic losses, a weakening of Russia, and the potential emergence of a political landscape resembling what has been termed “Iranization.” Concurrently, Russia is experiencing marginalization in the international arena. Despite these challenges, according to Chinese assessments Putin maintains a high approval rating, and the political regime exhibits resilience. Consequently, it is unlikely that the regime will be significantly weakened as a direct consequence of the ongoing conflict.

These observations may lead China to conclude that, even in the face of international isolation and unprecedented external economic pressures, a functioning political regime can maintain high stability. This stability is underpinned by the availability of ample resources for export, the ability to circumvent sanctions with the aid of third-party nations, and the consolidation of societal cohesion through comprehensive propaganda and repressive measures. Consequently, China may infer that it can establish a similarly stable political regime, provided specific conditions are met. This perspective aligns with the assessment put forth by Dr. Zhao, a senior fellow in the Nuclear Policy Program at the Carnegie Endowment for International Peace, who posits that Russia's ability to weather Western sanctions demonstrates valuable lessons for China.¹³

The conditions necessary for ensuring such stability are currently evident, potentially accelerated by the Russian-Ukrainian conflict and the convening of the 20th CCP Congress. These conditions encompass:

¹³ “China’s Lessons Learned from Ukraine: a Conversation with Dr. Tong Zhao,” *CSIS*, April 13, 2022, <https://www.csis.org/podcasts/chinapower/chinas-lessons-learned-ukraine-conversation-dr-tong-zhao>

a) Initiatives aimed at establishing an effective system to shield China from external sanctions by developing self-reliant technological and production chains.

b) The reinforcement and maintenance of government control over Chinese society.

c) The exclusion of opposition and competing forces from political circles.

These ongoing processes may also indicate that China is actively preparing for potential conflicts in the Taiwan Strait and is working to establish the prerequisites for sustainable internal stability under such circumstances.

Thesis 9 - US alliances are strengthening

The preeminent consequence of the Russian-Ukrainian conflict on the global stage, as observed by Chinese experts in June 2022, has been the substantial bolstering of US influence in Europe.

“The impact on the international architecture is that the US is the biggest beneficiary of the conflict, and its political goals are being actively promoted - weakening Russia, strengthening leadership over Europe; receiving significant benefits in the

energy, trade and arms trade,” - said expert on international relation.

In addition, they noted the strengthening of US alliances: “The Western camp is definitely strengthening, which leads to an increase in the influence and power of the United States and helps to strengthen its economic position, which will lead to the fact that the US will conduct a “more assertive foreign policy.”

Another notable trend identified by experts is the strengthening of inclinations towards the formation of military alliances, an escalation in the arms race, increased defense expenditures, the modernization of armed forces, including nuclear arsenals, and the fervent desire of non-nuclear states to acquire nuclear weapons.

This trend signifies that, in the international arena, China perceives the situation as adverse for its own interests. The bolstering of the US and its alliances, coupled with the arms race, is viewed by China as a direct threat. China's criticism is directed not towards Russia, despite its role in the aforementioned consequences due to aggression, but towards the United States, perceived as the primary beneficiary of the conflict.

The negative attitude towards the US was also noticeable during the next discussion in November 2022. “The US is constantly strengthening its strategy to contain China, and at the bilateral and multilateral levels in the economy, security, the US intends to exclude China from world processes. In addition, the US continues to provoke conflicts around the territory of China,” said the Chinese expert.

This perception will lead to strengthening China’s sense of its own danger, surrounding itself by Western alliances and trying to defend itself by rapidly increasing its military potential. The perception of the US as a threat will deepen, which reduces China’s opportunities for dialogue with Washington. In this aspect, it is not excluded that China can demonstrate constructiveness, readiness for dialogue, but the feeling of insecurity vis-à-vis the US will remain and intensify.

Thesis 10 - Pressure on the West can be effective

The orientation of questions posed by Chinese experts indicated that China perceives pressure on the West as an effective strategy. They seem to be relying on factors such as Western fatigue from the ongoing Ukrainian conflict, divisions within the elites of European countries, and the efforts of major

European businesses to revert to their pre-conflict operations. This gradual shift in support, from their opinion, could potentially alter the balance of power in favor of Russia.

For example, they posed questions such as:

“The conflict has entered the stage of exhaustion, and the anti-Russian front is currently holding on, but it can be weakened. There are different interests in Europe, and will European countries continue to put pressure on Putin?”

“Will Western countries put pressure on Ukraine to initiate peace talks?”

“How long will Western assistance to Ukraine persist, and will it dwindle in the fall due to war fatigue?”

“What are the prerequisites for the Ukrainian side’s readiness to engage in negotiations?”

This indicates that China tried to measure Europe’s resistance to external pressure and the effectiveness of Russia’s blackmailing of the EU in order to force Kyiv to negotiate peace with Moscow and surrender. And the question of the “limit of Western aid” is important for the Chinese side’s understanding of the future course of the Russian-Ukrainian conflict and forecasting its possible operation against Taiwan. In particular,

regarding the effectiveness of pressure on the international environment in order to force Taiwan to capitulate and reduce the limit of Western aid.

In November 2022 Chinese experts made statements that indicate the failure of their assessments made in June regarding “fatigue from Ukraine in Europe”, assessed the stability of Europe as sufficient for the successful passage of the autumn-winter period, but noted that “the EU economy is suffering significant losses due to the crisis and a decrease in the competitiveness of industry due to high production costs, the level of unemployment will also increase, the devaluation of the euro, right-wing politicians who will be focused on solving internal problems in their countries are more likely to come to power”. According to Chinese experts, this reconfiguration of power in Europe, as well as the coming to power of the Republicans in the US, can slow down the supply of weapons to Ukraine. Such conclusions regarding the advantages for China of the arrival of right-wing politicians in the EU may prompt China to find ways to support political forces that are more oriented towards domestic problems and business interests,

which will generally be beneficial for China in the case of its operation against Taiwan.

Thesis 11 - Russian nuclear blackmail is effective and can be used by China

Chinese experts underscored the effectiveness of Russian nuclear blackmail and the threat of nuclear weapon use, which had a significant deterrent effect on Western actions in providing assistance to Ukraine. This assessment implies that China recognizes the potential for nuclear coercion as a viable strategy, which could be applied in its own geopolitical context if necessary.

“The parties to the conflict (the US and Russia) drew red lines in the actions of the enemy. In particular, NATO led by the USA would like to directly intervene in the conflict, but Russia’s demonstration of its nuclear triad played the role of intimidation and nuclear deterrence, which restrained the intentions of the collective West led by the US. Another example - when the collective West led by the USA was going to provide Ukraine with deadly weapons, Russia drew a red line, which forced the US to provide Ukraine with MLRS with a limited range,” said a security expert.

The implications of China's recognition of the effectiveness of nuclear blackmail are profound. It suggests that China may consider using similar tactics to deter Western intervention in the Taiwan Strait conflict and reduce foreign aid to Taiwan. Given the importance of Western weapons in the conflict, stopping their supply could significantly impact Taiwan's ability to defend itself. Consequently, Beijing is likely to prioritize preventing direct US and allied involvement in the Taiwan Strait conflict and inhibiting military aid to Taiwan.

This strategic shift may lead China to further bolster its nuclear arsenal and strengthen its overall strategic deterrence capabilities. As alluded to in Xi Jinping's report at the 20th Congress of the CCP,¹⁴ there are already reports of China's intention to expedite the expansion of its nuclear arsenal, which currently consists of around 350 nuclear warheads.¹⁵ Some estimates suggest that this number could increase to 1,500

¹⁴ "Full text of the report to the 20th National Congress of the CCP," *Chinese MFA*, October 25, 2022, https://www.fmprc.gov.cn/eng/zxxx_662805/202210/t20221025_10791908.html.

¹⁵ "Global nuclear arsenals are expected to grow as states continue to modernize – New SIPRI Yearbook out now," *SIPRI*, June 13, 2022, <https://www.sipri.org/media/press-release/2022/global-nuclear-arsenals-are-expected-grow-states-continue-modernize-new-sipri>

warheads by 2035.¹⁶ This escalation underscores China's commitment to enhancing its strategic capabilities, including nuclear deterrence, as part of its broader security strategy.

In this context, the use of nuclear weapons wouldn't be solely for deterring aggression but could potentially serve as a tool for forcefully changing the current status quo. Such a stance could reflect a shift from the traditional doctrine of nuclear deterrence to a more assertive and potentially coercive role for nuclear capabilities in China's security policy.

Conclusions

Firstly, the Russian-Ukrainian war is considered by China as a partial model for the future operation of China against Taiwan in terms of its causes (restoration by the great powers of its historical zone of influence, in connection with which China sympathizes with Russia), as well as in relation to the dimensions of the war - military, informational, economic and international.

Secondly, the general conclusion from China's strategic vision is that the Russian invasion is justified, but was made with

¹⁶ "China set to expand nuclear arsenal to 1,500 warheads by 2035, US says," *Financial Times*, November 29, 2022, <https://www.ft.com/content/5313cc68-5fc8-4c0b-bdcb-e5c39245ba3a>

incorrect military calculations, which led to mistakes and failures of Russia. This should be very carefully taken into account by China regarding its actions against Taiwan in order to select such a time and tools as to make the future operation quick and prevent the West from interfering.

Thirdly, the feeling of national humiliation, which is widely cultivated by the Chinese political leadership,¹⁷ is also felt in the discourse of high-ranking Chinese experts. This could be an indicator that China is increasingly seeking revenge by solving the “Taiwan issue”, the “return of Taiwan” is considered irreversible. Consequently, the question is that if the peaceful way of “reunification” fails, will China consider the military method irreversible. Currently, there are more and more indicators of the strengthening of just such a point of view.

Forth, the desire to “restore historical justice” is also facilitated by China’s demeaning attitude towards small nations, as peoples who do not have their own right to self-determination, “buffer zones”, “bridges between superpowers”, “puppets of the

¹⁷ Alison A. Kaufman, “Testimony before the U.S.-China Economic and Security Review Commission Hearing on “China’s Narratives Regarding National Security Policy” The “Century of Humiliation” and China’s National Narratives,” *USCC*, March 10, 2011, <https://www.uscc.gov/sites/default/files/3.10.11Kaufman.pdf>.

West”, etc. This attitude towards Ukraine is also reflected in the attitude towards Taiwan, which strengthens China's confidence to decide the fate of the small nation - Taiwan. The absence of any faith in the subjectivity of a small nation, respect for it, strengthens this desire.

Fifth, issues that are important for liberal democracies - in particular, the humanitarian aspect, compliance with international law and the rules of war, are unimportant to China. This means that China, in general, would like to avoid humanitarian problems, the killing of civilians, but this is not a key factor in deterring China from starting a war. War crimes, loss of civilians are issues that China considers as elements that can change the international position, so it will be a priority for China to keep these things in the shadow from the international community.

Sixth, conclusion that China draws is that the operation against Taiwan must be carried out quickly, without transitioning to a war of attrition, before the West can react. The conditions for the success of such an instant operation of China are: the achievement of a technological superiority of weapons; hiding from the West the time of the start of such an operation;

cutting off Taiwan informationally from all communications with the outside world by non-contact and contact methods; finding methods to destroy/suppress Taiwan's autonomous means of communication; China's intimidation of the West with the help of nuclear and missile threats in order to prevent the intervention of the US and its allies in the conflict.

Seventh, in addition to the missile component, the importance of “boots on the ground” for establishing control over enemy territory cannot be overstated. Given the high urbanization of Taiwan, the lack of combat experience of the PLA, the ability to conduct combat operations in the city may become a serious issue and problem for the PLA. Therefore, one of the indicators that need to be monitored is the focus of combat training of the PLA on urban warfare.

Eight, the key element to win the war is the morale of the troops, society, and state leadership. China, understanding this and the fact that it is high morale that enables Ukraine to resist, will look for ways to objectively assess Taiwan's morale; searching for its weak elements; undermining the morale of the army, leadership and society, creating a split between them;

searching for potential traitors and collaborators in the Taiwanese political and military leadership.

Ninth, the political stability of the Russian regime is one of the issues China is studying, how to form the most stable own regime. Meanwhile Russia's efforts to put pressure on the West with the help of the energy and migration crisis, the disinformation, forcing Ukraine to negotiate on Russia's terms, efforts to reduce Western arms supplies to Ukraine, support for alternative political forces in Europe are examples that China will likely implement in relation to Taiwan.

The key strategic tool is the nuclear weapon, which can restrain the direct intervention of the US and its allies in the conflict in the Taiwan Strait, as well as significantly limit their military assistance. China's development of its nuclear potential is probably carried out precisely for this purpose, and is an indicator of preparation for a forceful change of the status quo in the Taiwan Strait.

And finally, it should be noted that some of theses, which were put forward by researchers earlier, described in Introduction part, were confirmed in this study. In particular, with regard to the need for more intensive and comprehensive

training for China, the introduction into military training of methods that allow effective warfare, find ways to undermine the enemy's morale and win the information war, prevent the West from interfering in the conflict, including through nuclear deterrence, the importance of improving the defense system against external sanctions. In addition to confirming these theses, the study provided an opportunity to look at other aspects of Chinese thinking.

《中共解放軍研究學術論文集》稿約

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一、專書

- (一) 中文：作者姓名，《書名》（出版地：出版者，出版年），頁 x 或頁 x-x。

【例】李英明，《國際關係理論的啟蒙與反思》（臺北：揚智文化，2004 年），頁 1-10。

- (二) 外文：Author's Full Name, *Complete Title of the Book* (Place of Publication: Publisher, Year), p. x or pp. x-x.

【例】Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon & Schuster, 1996), pp. 1-10.

二、專書譯著

- (一) 中文：Author's Full Name 著，譯者姓名譯，《書名》（ ）（出版地：出版者，出版年），頁 x 或頁 x-x。

【例】Douglass C. North 著，劉瑞華譯，《制度、制度變遷與經濟成就》(Institutions, Institutional Change, and Economic Performance)（臺北：時報文化，1994 年），頁 1-10。

- (二) 外文：Author's Full Name, *Complete Title of the Book* (Original Title of the Book), trans., Translator's Full Name (Place of Publication: Publisher, Year), p. x or pp. x-x.

【例】Michel Foucault, *The History of Sexuality Vol. 2: The Use of Pleasure* (Histoire de la Sexualité Vol. 2: l'Usage des Plaisirs), trans., Robert Hurley (New York: Pantheon Books, 1985), pp. 1-5.

三、專書論文

- (一) 中文：作者姓名，〈篇名〉，編者姓名編，《書名》（出版地：出版者，出版年），頁 x 或頁 x-x。

【例】張五岳，〈中共政局變遷對我國家安全之影響〉，丁渝洲主編，《臺灣安全戰略評估 2003-2004》（臺北：遠景基金會，2004 年），頁 36-40。

(二) 外文：Author's Full Name, "Title of the Article," in Editor's Full Name, ed., *Complete Title of the Book* (Place of Publication: Publisher, Year), p. x or pp. x-x. 【例】Douglass C. North, "Five Propositions about Institutional Change," in Jack Knight & Itai Sened, eds., *Explaining Social Institutions* (Ann Arbor: University of Michigan Press, 1995), pp. 18-21.

四、專書論文譯著（請依個別刊物實際出版項，完整臚列）

(一) 中文：Author's Full Name 著，譯者姓名譯，〈篇名〉（篇名原文），編者姓名編，譯著者姓名譯著，《書名》（ ）（出版地：出版者，出版年），頁 x 或頁 x-x。

【例】Gerry Stoker & David Marsh 著，陳景堯譯，〈緒論〉 (Introduction)，David Marsh & Gerry Stoker 編，陳義彥等譯，《政治學方法論與途徑》 (Theory and Methods in Political Science)（臺北：韋伯文化國際出版有限公司，2007 年），頁 11-13。

(二) 外文：Author's Full Name, "Title of the Article," in Editor's or Author's Full Name, (ed.,) *Complete Title of the Book* (Original Title of the Book), trans., Translator's Full Name (Place of Publication: Publisher, Year), p. x or pp. x-x.

【例】Jacques Lacan, "The Agency of the Letter in the Unconscious or Reason Since Freud," in Jacques Lacan, *Écrits: A Selection (Écrits)*, trans., Alan Sheridan (New York: Norton, 1977), p. 163.

五、期刊論文（請依個別刊物實際出版項，完整臚列）

(一) 中文：作者姓名，〈篇名〉，《刊物名稱》，第 x 卷第 x 期，年月，頁 x 或頁 x-x。

【例】石之瑜，〈面對戰爭發言的權利〉，《遠景基金會季刊》，第 5 卷第 3 期，2004 年 7 月，頁 1-10。

(二) 外文：Author's Full Name, "Title of the Article," *Name of the Journal*, Vol. x, No. x, Month Year, p. x or pp. x-x.

【例】Joseph S. Nye, Jr., "U.S. Power and Strategy after Iraq," *Foreign Affairs*, Vol. 82, No. 4, July/August 2003, pp. 68-71.

六、官方文件（請依個別文件實際出版項，完整臚列）

(一) 中文：作者姓名，〈篇名〉，《刊物名稱》，第 x 卷第 x 期，年月，頁 x 或頁 x-x。

【例】石之瑜，〈面對戰爭發言的權利〉，《遠景基金會季刊》，第 5 卷第 3 期，2004 年 7 月，頁 1-10。

(二) 外文：Author's Full Name, "Title of the Article," *Name of the Journal*, Vol. x, No. x, Month Year, p. x or pp. x-x.

【例】Joseph S. Nye, Jr., "U.S. Power and Strategy after Iraq," *Foreign Affairs*, Vol. 82, No. 4, July/August 2003, pp. 68-71.

七、網際網路（請依個別網站線上實際資訊，完整臚列）

(一) 中文：

1. 專書：作者姓名，《書名》（出版地：出版者，出版年），頁 x 或頁 x-x，《網站名稱》，〈網址〉。

【例】經濟部商業司編，《2002 中華民國電子商務年鑑》（臺北：經濟部，2003 年），頁 1-10，《經濟部網路商業應用資源中心》，

<<http://www.ec.org.tw/doc/2003-12-12-09-41-29-2002>
中華民國電子商務年鑑.pdf>。

- 2.官方文件：官署機構，〈文件名稱〉（行政命令類）或
《文件名稱》（法律類），卷期（案號），日期，頁
x 或頁 x-x，《網站名稱》，<網址>。

【例】中華民國總統府，〈修正老人福利法〉，第 6729
號，2007 年 1 月 31 日，頁 2，《總統府公報》，
<<http://www.president.gov.tw/Default.aspx?tabid=84&ctl=view&itemid=2349&ctid=96&q=>>。

(二) 外文：

專書：Author's Full Name, *Complete Title of the Book*
(Place of Publication: Publisher, Year), p. x or pp. x-x,
Name of the Website, <URL>.

【例】Michael D. Swaine & Ashley J. Tellis, *Interpreting
China's Grand Strategy: Past, Present, and Future* (Santa
Monica, Calif.: Rand, 2000), pp. 1-10, *RAND
CORPORATION*,
<<http://www.rand.org/publications/MR/MR1121/>>.

八、第二次引註

首次引註須註明完整的資料來源（如上例），第二次以
後之引註採下列格式：

作者姓名，《書刊名稱》或〈篇名〉或特別註明之「簡
稱」，頁 x 或頁 x-x。

肆、字型規格

一、題目：標楷體 20 號粗體字，單行間距，置中。

二、作者姓名：標楷體 16 號字，置右。

三、作者職稱：新細明體 8 號字，加括號，置右。

四、摘要：標題為標楷體 14 號粗體字，置中；內文為
標楷體 12 號字，左右對齊。

五、關鍵詞：標題為新細明體 12 號粗體字，詞組為標
楷體 12 號字，左右對齊。

- 六、段落標題：主段落標題——新細明體 14 號粗體字，置左。次段落標題——標楷體 14 號字，置左。分項標題——新細明體 12 號粗體字，置左。
- 七、內文：新細明體 12 號字，左右對齊。
- 八、註釋：新細明體 10 號字，置於頁尾、左右對齊，第二行內縮至題號後，與第一行文字對齊。
- 九、圖表：標題為華康中黑體 12 號字，置中。
- 十、英文部分：Times New Roman（各項次字體之大小與中文部分相同）。