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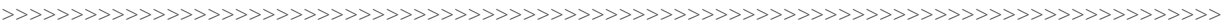
RUSSIA'S 2022 INVASION OF UKRAINE: IT'S MEANING FOR TAIWAN AND SINGAPORE

Bilveer Singh

INTRODUCTION

By definition, small states are defined by their perpetual vulnerability. According to a *Commonwealth Report*, small states are vulnerable due to their geographical positioning, strong dependence on international trade, limited access to development finance and disproportionate impact of natural disasters and climate change. While what constitutes a small state remains contested, be it based on population or geographical size, equally important is how a state itself and others perceive that particular state. Thirty-two out of the forty-two Commonwealth members are defined as small states.¹ There are also many small states outside the Commonwealth as is evident in a United Nations organization, the Forum of Small States that is made up of 108 members. Hence, the majority of states in the world can be defined as 'small'.²

On a continuous basis, large states such as the United States, European Union, China and Russia also have the propensity to pressure smaller states to enter into one kind of treaty arrangement or another where these small states' sovereignty is often undermined. New issues, developments and threats such as money laundering, drug trafficking and terrorism have also made these states more vulnerable than the past. Any issue, be it political, economic or social within a small state, or a political, economic or military threat from without, can quickly be transformed into an existential threat



¹ "Small States", Commonwealth. See <https://thecommonwealth.org/our-work/small-states#:~:text=The%20Commonwealth%20defines%20small%20states,Namibia%2C%20and%20Papua%20New%20Guinea>.

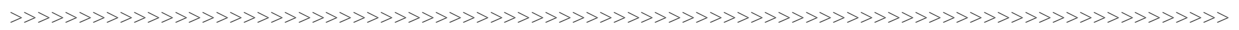
² "Small States", Ministry of Foreign Affairs, Singapore. See [https://www.mfa.gov.sg/SINGAPORES-FOREIGN-POLICY/International-Issues/Small-States#:~:text=Small%20states%2C%20by%20their%20very,the%20United%20Nations%20\(UN\)](https://www.mfa.gov.sg/SINGAPORES-FOREIGN-POLICY/International-Issues/Small-States#:~:text=Small%20states%2C%20by%20their%20very,the%20United%20Nations%20(UN)).

for any small state. It is against this backdrop, how the February 2022 Russian invasion of Ukraine has impacted upon Taiwan and Singapore, two examples par excellence of small states in the international system, will be addressed. How the Russian invasion of Ukraine, essentially a large state's invasion of a small one, has impacted upon Taiwan and Singapore is studied here.

TAIWAN AND SINGAPORE: STRIVING FOR EXISTENTIAL SURVIVAL

What makes both Taiwan and Singapore particularly unique is their realization that they will be permanently defined and perceived as small states, and even more important, both Taipei and Singapore also operate from the premise that they are small states in the international system and hence, under perpetual threat.³ Taiwan, with a population of about 23.5 million (2021), has a land area of 36,188 square kilometers. It is located about 180 kilometers across the Taiwan Straits from southeastern China. Geographically, Taiwan lies astride the East and South China Seas in the north-western Pacific Ocean bordering China in the northwest, Japan to the northeast and the Philippines to the south. Demographically, Taiwan has a largely Han Chinese majority, between 95 to 97 percent of the total population. Singapore, like Taiwan is an island state with a population of about 5.8 million (2021). It lies between Malaysia and Indonesia, being on the southern end of the Malay Peninsula, bordering the Straits of Malacca to the west. Singapore has a population of about 76 percent Chinese, 14 percent Malay, 8 percent Indians and the balance 2 percent being 'others'. While comparatively Singapore is much smaller than Taiwan, still, in academic discussions, Taiwan is seen as a small state, especially when discussed as an entity separate from China.⁴

Against this backdrop, the Russian invasion of Ukraine is significant for both Taiwan and Singapore as the existential threat posed by great powers is always a fact of life. Hence, this paper will look at what the Russian invasion of Ukraine mean for these



³ While many works exist on Singapore as a small state, two works on Taiwan as a small includes Hu Shaohua, "Small State Foreign Policy: the diplomatic recognition of Taiwan", *China: An International Journal*, Vol; 13, No. 2, August 2015, pp. 1-23; Andrew T.H. Tan, "The Taiwan issue and small state survival", in Benjamin Schreer and Andrew T.H. Tan (eds.), *The Taiwan Issue: Problems and Prospects*, (London: Routledge, 2019).

⁴ Wu Shang-Su, *The Defence Capabilities of Small States: Singapore and Taiwan's Responses to Strategic Desperation*, (United Kingdom: Palgrave Macmillan, 2016); Brian Hoe, *Why is Taiwan Thought of as a Small Country?* (New York: Bloom, 2016).

two small states even though they are different in many sense, politically, economically, demographically and even in terms of geopolitics.

TAIWAN AND SINGAPORE – LIVING IN THE SHADOWS OF A GREAT POWER

Both Taiwan and Singapore have had to face the reality that not only are they small states but even more poignant is the fact that they are living in the shadows of a great power, with Taiwan and Singapore being dwarfed by China and Indonesia respectively, just as Ukraine has been living in the shadows of Russia since 1991 (see comparative statistics in Table 1, 2 and 3 below). Hence, from almost every angle of the elements and sinews of power, small states such as Ukraine, Taiwan and Singapore have had to operate from a position of clear asymmetry, and from this perspective of inferiority, how best to ensure its sovereignty and territorial integrity.

TABLE 1: Russia and Ukraine Compared

	Russia	Ukraine
Land Area	17,098,242 KM ²	603,550 KM ²
Coastline	37,653 KM	2,782 KM
Population	142.3M	43.7M
Annual GDP	\$1709B USD	\$164.5B USD
GPD Per Capita	\$11,000 USD	\$3,100 USD
Military Personnel	850,000	200,000
Tanks	12,420	2600
Armoured Vehicles	30,200	12,300
Self-Propelled Artillery	6575	1067
Towed Artillery	7570	2040
Rocket Projectors	490	3390
Total Aircrafts	775	320
Fighters	775	70
Dedicated Fighters	740	30
Transport planes	450	30
Helicopters	1550	110

Attack Helicopters	550	35
Naval Fleet	605	38
Aircraft Carriers	1	0
Submarines	70	0
Destroyers	15	0
Frigates	11	0
Corvettes	90	1
Patrol Crafts	60	1
Nuclear Warheads	6260	0

SOURCES:

https://www.globalfirepower.com/country-military-strength-detail.php?country_id=Russia
https://www.globalfirepower.com/country-military-strength-detail.php?country_id=ukraine

TABLE 2: China and Taiwan Compared

	China	Taiwan
Land Area	9,600,013 KM ²	35,980 KM ²
Population	1,414,350,000	23,561,000
Coastline	14,500 km	1566 km
Annual GDP	\$14,866,740M USD	\$668,156M USD
GDP Per Capita	\$10,511 USD	\$28,358 USD
Military Personnel	2,000,000	170,000
Para-Military Forces	625,000	11,500
Defence Budget	\$250,240,000,000 USD	\$16,800,000,000 USD
Total Aircraft	3285	740
Fighter Aircraft	1200	290
Dedicated Attack Aircraft	370	0
Transport Aircraft	285	20
Special Mission Aircraft	115	20
Helicopters	915	215
Attack Helicopters	280	90

Tanks	5250	1110
Armoured Vehicles	35,000	3475
Self-Propelled Artillery	4120	260
Towed Artillery	1735	1410
Mobile Rocket Projectors	3160	115
Naval Ships	777	117
Aircraft Carriers	2	0
Heli-Carriers	1	0
Submarines	80	4
Destroyers	40	4
Frigates	50	22
SOURCES: https://www.globalfirepower.com/country-military-strength-detail.php?country_id=china https://www.globalfirepower.com/country-military-strength-detail.php?country_id=taiwan		

TABLE 3: Indonesia and Singapore Compared

	Indonesia	Singapore
Population	275.5 million	5.7 million
Coastline	54,716 km	193 km
Defence Budget	\$11.5B USD	\$9.3B USD
Gross Domestic Product	\$1150B USD	\$390B USD
Gross Domestic Per Capita	\$3920 USD	\$59,500 USD
Military Manpower	400,000	60,000
Tanks	170	315
Armoured Fighting Vehicles	3500	1440
Artillery	205	360
Self-propelled Artillery	77	400
Rocket Artillery	25	60
Air Force Aircrafts	245	445
Fighter Aircraft	100	40

Transport Planes	10	66
Special Mission Planes	10	17
Multirole Fighters	100	65
Attack Aircrafts	18	15
Helicopters	85	170
Attack Drones	0	10
Navy Ships	45	300
Frigates	6	7
Corvettes	6	25
Submarines	5	5
Patrol Vessels	15	180

SOURCES:

https://www.globalfirepower.com/country-military-strength-detail.php?country_id=indonesia
https://www.globalfirepower.com/country-military-strength-detail.php?country_id=singapore

THE RUSSIAN INVASION OF UKRAINE AND WHAT IT MEANS FOR TAIWAN AND SINGAPORE?

Vladimir Putin’s Russia has been threatening Ukraine for quite some time, especially when the West succeeded in weaning away Ukraine from Moscow politically since 2005. This was following the 2004 election when the pro-Russian Viktor Yanukovich won the election but was strongly protested against for alleged rigging, in what is known as the ‘Orange Revolution’. In the re-run, the pro-Western candidate, Viktor Yushchenko, won, promising to bring Ukraine into the EU and NATO. For Moscow, Kiev’s leaning towards the West, especially through its closer economic ties with the European Union, its preparedness to join NATO and its increasingly oppositionist attitude towards Moscow, was interpreted as acts of hostility by Moscow.

In 2010, Yanukovich won the presidential elections. He moves Ukraine away from the West and into a closer relationship with Moscow. This was triggers public protests against him. This reached a climax in 2014 following what is known as the Euromaidan protest movement that toppled the pro-Russian president, Viktor Yanukovich. The largely Western-inspired protest movement began in November 2013 when Ukraine failed to sign the European Union Association Agreement. As a result of the Euro-maidan protest in late February 2014, Yanukovich and many of his cabinet ministers

fled to Moscow, whereby opposition political members and crossovers from Yanukovich party, voted to remove the president, which Moscow interpreted as a 'coup d'état' but where the West recognized the new caretaker government.

As there were many pro-Yanukovich supporters in Crimea and the city of Sevastopol, they opposed the sacking of Yanukovich, leading to calls for separation from Ukraine. Many Russian speakers also lived in eastern Ukraine, including in Crimea and Sevastopol. Following pro-Russian demonstrations in Crimea and Sevastopol, the local government was captured by these separatists, who later conducted a 'referendum' and declared Crimea's independence on 16 March 2014. On 21 March, Russia formally incorporated Crimea and the City of Sevastopol as parts of Russia, escalating its conflict with Ukraine.

Since then, an armed conflict has persisted in eastern Ukraine, in the largely Russian-speaking part of the country bordering with Russia. Two largely Russian-speaking territories in eastern Ukraine that share a border with Russia, namely, the self-declared Donetsk People's Republic and Luhansk People's Republic in a region that is generally referred to as 'Donbas', were recognized as independent states by Russia on 21 February 2022. The situation reached a boiling point when on 24 February 2022, Russia invaded Ukraine, with the war still ongoing at great cost of lives, damage to property, a massive humanitarian crisis and where the conflict is having a massive international political, economic and security consequences.

TAIWAN'S RESPONSE TO THE RUSSIAN INVASION OF UKRAINE

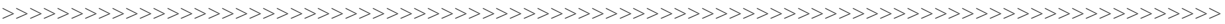
Taiwan's response to Russia's invasion of Ukraine stemmed from its essential security policy of ensuring its independence and territorial integrity. This is because China has continuously maintained irredentist claims over Taiwan since 1950. Even though the Taiwan Strait has provided a degree of physical security, Taiwan has been under siege from its mammoth neighbor and claimant which outsizes her physically, economically, and militarily. 'Liberating' Taiwan has been an article of faith of every Beijing Government and Taipei has had to develop a complex set of policies, both internal and external, to ensure that Beijing is deterred from undertaking such a course of action, especially through military force. While the US's policy of containment since 1947, and especially since 1950, has provided a degree of security, still Taipei has had to ensure that it simply cannot depend on American goodwill for its safety and security, especially in face of the rise of China as a superpower, at least in East Asia, and the relative decline of the US since the late 1980s.

of policy principles affirming U.S. support for Taipei".¹⁰ She also argued that "with the PRC [China] as the department's pacing challenge, Taiwan is the pacing scenario. And, we aim to deter and deny PRC aggression through a combination of Taiwan's own defenses, its partnership with the United States, and growing support from like-minded democracies".¹¹ Even though she noted that the "the lessons that I draw on, number one, are the importance of Taiwan developing its own [self-defense] capabilities", still the US's response to a China attack on Taiwan would be different to that of a Russian attack on Ukraine.¹²

SINGAPORE’S RESPONSE TO THE RUSSIAN INVASION OF UKRAINE

Singapore’s response to the Russian invasion of Ukraine was almost similar to Taiwan’s, only that it did not have a militarily strong China threatening to incorporate it. Still, Singapore’s response exuded a typical behavior of a small state in the face of a state practicing a policy of ‘might is right’. While small states have often been counselled to maintain a ‘low profile’ in international relations, Singapore has from the start done just the reverse, adopting a highly activist posture in international relations. Due to the burden of geography and demography, being a largely small Chinese island republic surrounded by two large Malay neighbors, heavily dependent on international trade for its survival and have a long history of difficult ties with its immediate neighbors, it has had to adopt a prudent foreign to ensure its survival. A low-profile foreign policy has not been an option, with the republic being strong active on the international scene.¹³

Like Taiwan, Singapore pays high premium to the importance of international law and norms as its first line of defense. At the same time, realism has dictated that in the ‘jungle of international relations’, Singapore adopts a balance of power approach to ensure its security. As was stated by its first foreign minister, S. Rajaratnam, “we in Singapore accept the fact of great powers and the fact of great power rivalry in Southeast Asia”.¹⁴ Due to this, a balance of great powers is seen as a better way to security than allowing a single great power to dominate the region. According to Rajaratnam, “my government believes that for us, small countries, the more the big powers are around in this

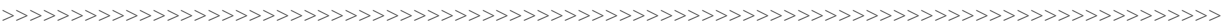


¹⁰ "Taiwan invasion response would be different to Ukraine: Pentagon official", *Focus Taiwan*, 10 March 2022, <https://focustaiwan.tw/politics/202203100005>
¹¹ *Ibid.*
¹² *Ibid.*
¹³ See Bilveer Singh, *The Vulnerability of Small States Revisited: A study of Singapore’s Post-Cold War Foreign Policy*, (Yogyakarta: Gadjah Mada University Press, 1999), pp.11-36.
¹⁴ Cited in *The Mirror*, Vol. 12, No. 28, 12 July 1976, p.1.

area, the better for us because our options are bigger”.¹⁵ Hence, “the best way to ensure that no single power or coalition of powers exercise hegemony over Southeast Asia is to have a multiplicity of external great powers involved in the region, balancing each other...allowing small states in Southeast Asia greater room for maneuver”.¹⁶

While the presence of great powers is a fact of life in Southeast Asia, mainly due to the strategic importance of the region, at the same, Singapore is also confronted with the presence of Indonesia, which constitute half of Southeast Asia in terms of population and geography, is in control of key sea lanes of communications and the largest Muslim state in the world. Indonesia has also exerted pressure on Singapore, including launching a limited military operation called ‘Confrontation’ from 1963 to 1966, opposing the hanging of two Indonesian marines who were tried for a bombing operation that killed 3 and injured 30 in the republic and expressing her unhappiness with the republic when Singapore initially did not support Indonesia’s invasion of East Timor in December 1975. To that extent, while Singapore is not akin to a ‘Ukraine to Russia’ or ‘Taiwan to China’, still the reality of political, economic and military asymmetry vis-à-vis Indonesia played a critical role in Singapore’s response to the Russian invasion of Ukraine, just as in the past when the USSR invaded Afghanistan or Vietnam invaded Cambodia.

Hence, in March 2004, following Russia’s capture of Crimea and support for the separatist groups in eastern Ukraine, the then foreign minister, K. Shanmugam stated categorically that “We strongly object to any unprovoked invasion of a sovereign country under any pretext or excuse. Russian troops should not be in Ukraine in breach of international law. The sovereignty and territorial integrity of Ukraine must be respected. International law must be respected. There can be no qualifications to this”.¹⁷ The minister emphasized that “Singapore has always emphasized, that big or small, all coun-



¹⁵ The Straits Times, 14 May 1975.

¹⁶ Cited in *The Mirror*, Vol. 9, No.17, 23 April 1973, p.1.

¹⁷ See MFA Press Release: Remarks by Minister for Foreign Affairs K Shanmugam, 2nd Minister for Foreign Affairs Grace Fu, SMS for Foreign Affairs Masagos Zulkifli and SPS for Foreign Affairs Sam Tan in Parliament during the Committee of Supply Debate on 5 March 2014. Available at <https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2014/03/MFA-Press-Release-Remarks-by-Minister-for-Foreign-Affairs-K-Shanmugam-2nd-Minister-for-Foreign-Affai>

tries must observe international law” and that the events in Ukraine hold four key lessons for Singapore:

— Lesson No. 1 —

So, the first lesson really is, when it comes to the crunch, treaties are only meaningful if you have the ability to enforce them.

— Lesson No. 2 —

In international relations, size matters. The disparity between big and small countries is a fact of life. A small country which cannot protect itself puts its sovereignty and its people at risk.

— Lesson No. 3 —

The Security Council cannot always act decisively to protect small countries.

— Lesson No. 4 —

When squeezed between two big powers or blocs, a smaller country like Ukraine can become a pawn.¹⁸

Following the Russian invasion of Ukraine in February 2022, Vivian Balakrishnan, Singapore’s foreign minister condemned the invasion as a threat to global security. Singapore described the Russian action as “an unprovoked military invasion of a sovereign State”.¹⁹ For the Singapore’s foreign minister, “the events in Ukraine go to the heart of the fundamental norms of international law and the UN Charter, that prohibit the use of force and acts of aggression against another sovereign State. Russia’s invasion of Ukraine is a



¹⁸ *Ibid.*

¹⁹ See “Vivian Balakrishnan’s ministerial statement on Russia’s invasion of Ukraine”, ChannelNewsAsia, 28 February 2022. Available at <https://www.channelnewsasia.com/singapore/singapore-ukraine-crisis-russia-sanction-vivian-balakrishnan-ministerial-statementfull-2525281>

clear and gross violation of the international norms and a completely unacceptable precedent. This is an existential issue for us”.²⁰ As Singapore has stated repeatedly, “we are a staunch supporter of international law and the principles enshrined in the UN Charter. The sovereignty, the political independence and the territorial integrity of all countries, big and small, must be respected”.²¹ Just as K. Shanmugam enumerated in 2014, according to Vivian, there were a number of lessons to be learnt from the present Russian invasion of Ukraine:

First, whilst international law and diplomatic principles are essential, they are not sufficient;

Second, it is all too easy for a small country to be caught up in the geopolitical games of big powers. Small countries must avoid becoming sacrificial pawns, vassal states or “cat’s paws” to be used by one side against the other;

Third, as a young nation, it is vital for us to maintain domestic unity and cohesion, bearing in mind how easily internal divisions can be exploited by adversaries, especially in this internet age and the advent of hybrid warfare; and

Fourth, safeguarding one’s sovereignty and national interests often requires some sacrifice and pain. The Ukrainians are paying the ultimate price for freedom with their lives and livelihoods.²²

In view of Singapore’s position on the Russian invasion of Ukraine, like Taiwan, Singapore also took a number of active members, including: co-sponsoring a draft resolution in the UN Security Council to condemn the Russian invasion, which was vetoed by Russia; support the Uniting for Peace Resolution in the UN General Assembly; co-sponsoring a resolution on the situation of human rights in Ukraine; announcing sanctions and restrictions against Russia on export controls on items that can be used by Russia in Ukraine as well as blocking certain Russian banks and financial transactions. The sanctions include prohibition of transactions with four banks, VTB Bank, Corporation Bank, Promsvyazabank and Bank Rossiya.²³

In response, Russia declared Singapore as an ‘unfriendly country’ whereby all corporate deals with companies and individuals would have to be approved by a Russian



²⁰ *Ibid.*

²¹ *Ibid.*

²² *Ibid.*

²³ Hariz Baharudin, “S’pore imposes sanctions on four Russian banks”, *The Sunday Times*, 6 March 2022.

a lesson many small states can learn. Finally, for both Taiwan and Singapore, living in the shadows of big states mean that they would have to be on the vigil on a 7/24/365 basis as well as ensure that all domestic and foreign policies are undertaken to ensure that the existential survival of the state bar none. This is something that must be socialized to all citizens as well as political leaders, be it in the government or on the opposition bench.

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The views expressed are strictly personal and not of any institution, the author may be affiliated with.

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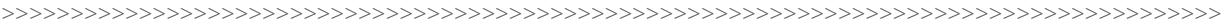
STRATEGIC IMPLICATIONS OF THE BEIDOU SYSTEM IN AFRICA

Domingo I-Kwei Yang

FOREWORDS

Despite a plethora of research looking into China’s increasing engagement with African countries in the midst of US-China competition, China’s growing interests in Africa’s space sector remain quite a puzzle to most analysts in the field. China has assisted Algeria, Democratic Republic of Congo, Ethiopia and Nigeria to launch satellites into space.¹ It has also granted loans to develop joint space programs and exported satellite-based technologies to countries including Angola, Côte d’Ivoire, Egypt, Gabon, Ghana, Kenya, Mozambique, Namibia, Sudan, Tunisia and Zambia.² *The China-Africa Cooperation Dakar Action Plan (2022-2024)* has explicitly mentioned that Africa’s aerospace sector is one of the highlights in the China-Africa industrial partnership, technology application and infrastructure development.³ Among the mentioned above, *Beidou* System (BDS), a global navigation system China operates by itself, is one of the priorities in China-Africa space-cooperation programs aimed at positioning, navigation, and timing (PNT) services with high accuracy around the clock.

On November 5th, 2021, Beijing organized the first China-Africa Beidou System (BDS) Cooperation Forum.⁴ Nearly 50 African countries took part in. Foreign representatives in the meeting included 8 ministers and 8 ambassadors.⁵ Since it has been estimated that the space industry revenue in Africa would surpass \$10.24B USD by 2024, it is not surprising that there are a great number of African countries expressing their

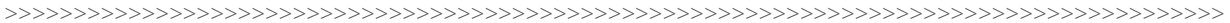


¹ Julie Michelle Klinger, "China, Africa, and the Rest: Recent Trends in Space Science, Technology, and Satellite Development," *China Africa Research Initiative Working Paper*, No. 38 (2020), pp. 1-25.
² *Ibid.*
³ FOCAC, "Forum on China-Africa Cooperation Dakar Action Plan (2022-2024)," Ministry of Foreign Affairs, the People's Republic of China, November 30, 2021, https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/202112/t20211202_10461183.html.
⁴ Zhao Lei, "China and Africa will strengthen cooperation on Beidou satellite system," *China Daily*, November 6, 2021, <https://www.chinadaily.com.cn/a/202111/06/WS618587cfa310cdd39bc73aa8.html>.
⁵ *Ibid.*

wishes to develop their own national space programs, leaving China many advantages in prospect.⁶ China claims that entering BDS applications can improve Africans' living standards, drive social and economic development of the locals, and prevent environmental disaster so as to sustain eco-environmental protection.⁷ Despite the propaganda surrounding China's BDS narrative, this article attempts to explore the strategic implications of BDS in Africa by investigating China's revisionist ambition, potential security challenge to the U.S. and direct contractors of BDS in Africa. The author finds that the BDS is orientated by a revisionist intention of China to become the leading space power and expand the market share of Chinese satellite-based technologies in Africa. To be more specific, application of BDS in Africa would enhance China's offensive capabilities of positioning, navigation, and timing (PNT) system. This can further impose a direct threat to the east part of the American Continent, altering the geopolitical status-quo. Lastly, the author also finds that the direct contractors of BDS projects in Africa are related to China's defense industry enterprises. Based upon the above findings, this article argues that China is using the BDS to increase its sphere of influence as footholds of military and influence operations in the African Continent.

CHINA'S SPACE TECHNOLOGY AND REVISIONIST AMBITION

China's BDS cooperation with African countries resonates with China's revisionist ambition to challenge the existing balance of power and equilibrium of capabilities. The development of China's space technology is revisionist by nature because it serves the goal of overall enhancement of national strength aiming to upgrade its capabilities relative to the competing powers. In the *White Paper of China's Space Program* in 2021, China's President Xi Jinping claims that China wants to become a space power that leads the world backed by self-reliant technologies.⁸ This narrative has implied that China at the current stage is not satisfied with the existing status and it seeks to alter the balance among all the relative capabilities in terms of space influence. As having been well-known to the observers in the field, the Chinese space industry is subject to national strategic needs of safeguarding national security, improving launch vehicles,



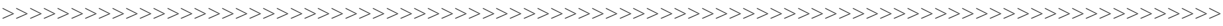
⁶ "African Space Industry Revenue to Surpass USD 10.24 billion by 2024 Despite COVID-19 Setback," *Space in Africa*, July 6, 2021, <https://africanews.space/african-space-industry-revenue-to-surpass-usd-10-24-billion-by-2024-despite-covid-19-setback/>.

⁷ *Ibid.*

⁸ State Council Information Office of the People's Republic of China, "China's Space Program: A 2021 Perspective," *China Daily*, January 29, 2022, <https://language.china-daily.com.cn/a/202201/29/WS61f4dee0a310cdd39bc84216.html>.

satellite communications, global data collection and integrating remote-sensing, communications, navigation, and positioning satellite technologies.⁹ All these strategic goals require to have an independent satellite-based ecosystem, without which, Beijing will find it difficult boosting its overall relative capabilities.

Geopolitically speaking, China's effort of BDS cooperation with African countries is likely to exclude other satellite-based technology suppliers so that it can maximize the market share of Chinese BDS applications in Africa via the Belt and Road Initiative (BRI). Take Mozambique for instance. Mozambique shifted to a Chinese satellite system on January 3rd, 2020.¹⁰ With a view to natural disaster monitoring, Mussa Mustafa, Director of Mozambique's National Meteorology Institute, valued China's BDS and monitoring satellite system better than the former suppliers.¹¹ Mustafa's decision to shift indicated that China has become an attractive competitor in the eyes of the African clients, who have tended to adapt its satellite-based technologies, excluding former European satellite-tech providers. As Temidayo Isaiah Oniosun, a Nigerian space scientist, noted, China has become the key financier to develop African countries' space programs and facilitate China-Africa BDS cooperation.¹² A contrast to European space cooperation with African countries that has been mainly research-driven, China's space cooperation with Africa is similar to its BRI inducements characterized by turnkey contracts.¹³ In other words, there are packages of grants, loans, credits and commercial investments, possibly resulting in a burden of debts on African borrowers. In short, Beijing will be highly likely to be the very one to reap the lion's share. Economically, Chinese founded space projects in Africa would facilitate China's telecommunication, digital economics, data centers, to name but three. Politically, China's space cooperation with African countries is part of the Chinese grand strategy to equip Beijing with the capabilities to project influence across the globe.¹⁴



⁹ *Ibid.*
¹⁰ Xinhua, "Mozambique starts using Chinese satellite system for predicting cyclones, natural disasters," *Xinhua*, January 3, 2020, http://www.china.org.cn/world/Off_the_Wire/2020-01/03/content_75576630.htm?_ga=2.54765231.568353810.1578123636-1883158874.1578123625.
¹¹ *Ibid.*
¹² Eric Olander, "China's Role in Africa's Rapidly Growing Space Market," *The China Africa Project*, November 19, 2019, <https://chinaafricaproject.com/podcasts/chinas-role-in-africas-rapidly-growing-space-market/>.
¹³ *Ibid.*
¹⁴ Thomas P. Cavanna, "Unlocking the Gates of Eurasia: China's Belt and Road Initiative and Its Implications for U.S. Grand Strategy," *Texas National Security Review*, Vol. 2 No. 3 (2019), pp. 10-37.

contractors of BDS in Africa has sent a signal that China’s preparation for future multi-domain operation has integrated satellite-based technologies that can be operated globally. This should be a wake-up call to Washington given that the U.S. private sectors remain a peripheral player in Africa’s overall space program. Since African countries have joined the space race, it is high time for American policymakers to establish rules-based space cooperation with Africa.

TABLE 1: The 10 Application Scenarios of BSD in Africa

Scenarios	Application and Solutions	Prime Contactor
Management of Vehicle and Transport	BDS positioning, navigation, warning and data collection services	China Transport Telecommunications & Information Center
Railway Industry	Railway construction and maintenance, time synchronization and manage passenger and freight transportation scheduling and warning system	China Railway Fifth Survey and Design Institute Group
Precision Agriculture	Auto-steering system and unmanned driving, remote maintenance, and big data	China Agricultural University
International Search and Rescue	Satellite alarm system, information transmission, positioning service	China Transport Telecommunications & Information Center
Land Surveying	High-precision positioning service, continuously operating reference stations, city planning, land surveying and mapping, urban and rural construction, environmental monitoring, disaster prevention, traffic monitoring, mine surveying	ComNav Technology
Digital Construction	Scientific control and management of construction process (highway, water conservancy excavation, dam, airport, etc.), multi-level of supervision.	Shanghai Huace Navigation Technology
Intelligent Mining	High-precision positioning, integrated intelligent monitoring platform, personnel security system and asset management system	NORINCO Equipment and NORINCO International

Public Safety	Real-time positioning, dynamic location monitoring, information aggregation, high-definition video recording, data collection and sharing	North Electronics Research Institute and Shenzhen Zhongbing Konka Technology
Wildlife Conservation	High-precision positioning, satellite remote sensing technology, wildlife tracking and monitoring	Chinese Academy of Forestry
Smart City	High-precision space-time common service system, safety monitoring, and green urban management, spatial-temporal related data collection	Qianxun Spatial Intelligence

SOURCE:

China Satellite Navigation Office, "10 Application Scenarios of BDS in Africa," Beidou, November 2021, <http://m.beidou.gov.cn/xt/gfzx/202111/P020211105587887134672.pdf>.

CONCLUSION

In light of the increasing Chinese engagement in the space sector with African countries and prospective Chinese satellite technologies highlighted by the China-Africa space cooperation, this article explores the strategic implication of the case of BDS applied in Africa. The author arrives at the conclusion that the export policy of China's satellite technology to Africa has been driven by a revisionist line, not just seeking to expand China's space tech market share in Africa. In addition to the market, the deployment of BDS in Africa is likely to tip the balance of the U.S. security environment. On the one hand, Washington is currently speculating a second Chinese naval base to be established in Equatorial Guinea. On the other hand, China's satellite technology can enhance its offensive capability, threatening the U.S. homeland, or at least the East coast, from Africa. More intriguingly, the direct contractors of BDS projects in Africa are related to Chinese defense enterprises. This has revealed a revisionist nature of BDS as a strategic instrument after the deployment.

The application of BDS in Africa will render African countries and neighboring regions highly vulnerable given China's state-owned defense enterprise can access sensitive geospatial intelligence and track down the exact position of human activities. All these have clearly indicated a revisionist line of China's export policy of BDS in application to African countries. Given the current limited role of U.S. engagement with Africa's

space sector, the author recommends that it is time for Washington to implement new policies of US-Africa space cooperation. There is a need to be physically present as a stakeholder in the African countries' space programs.

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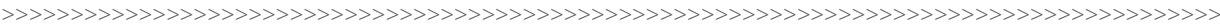
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THE MULTIVERSE OF DISCOURSE: HOW CHINA CREATES AN ALTER- NATIVE RUSSIAN-UKRAINIAN WAR

Tsung-Han Wu

Since Russia launched its “special military operation” to Ukraine on February 24, international society has paid a great attention to its “rock solid” partner, China, concerning about the role Beijing would play in this war. Although Beijing intended to display a profile of neutrality, calling for calm down and peaceful solution, this is completely not the case from observing its behavior in state-owned media and propaganda networks. Several media reports and analyses uncovered that China coordinated with Russia and helped to disseminate the pro-Russian narratives. Moreover, some of the narratives containing deliberately twisted and misinterpreted scenarios targeting Taiwan.

This essay aims to examine China’s cognitive warfare operations in general and some cases involving Taiwan in particular, after the war breaking out. For the cognitive warfare, this essay defines them as attacks aiming at altering or misleading minds of the target group or society through informational tools and approaches, with a desire supporting an objective and shaping advantageous environment for the operator. Disinformation might strengthen the dynamic of the warfare in the process but is not required.¹ This essay argues that the Russian-Ukrainian war provides China with an op-



¹ Bernard Claverie¹ and François du Cluzel, “The Cognitive Warfare Concept,” *NATO Innovation Hub*, <https://www.innovationhub-act.org/cw-documents-0>; Kathy Cao et al., “Countering cognitive warfare: awareness and resilience,” *NATO Review*, May 20, 2021, <https://www.nato.int/docu/review/articles/2021/05/20/countering-cognitive-warfare-awareness-and-resilience/index.html>.

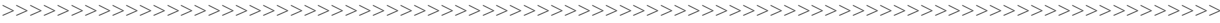
portunity influencing Taiwanese understanding of the war, spreading sense of fear, confusion and distrust, and yet the outcome seems not reach the expectation.

CHINA ECHOES RUSSIAN NARRATIVE OF WAR

The New York Times is one of the pioneers pointing out that China is using state resource to promote the pro-Russian views. It traces the cooperation from the official media between the two countries which has been about a decade, since Xi Jinping committed to deepen their relationship during his visit to Moscow in 2013. So far both side singed dozens of agreements about content-sharing already. According to a *Russian Today* executive, the Chinese state-owned media quoted news from *Russian Today* on average 2500 per week in 2021.²

In fact, the Chinese media are now only allowed to deliver one single voice other than the official stance. An article in Taiwanese media suggests that after Putin ordered the invasion, the Chinese media received an instruction from the government that they could only quote and be in line with the content issued by Xinhua News Agency or other official media. Two days before the war occurred, Publicity Department of the Chinese Communist Party reportedly instructed *Horizon News* belong to *The Beijing News* that content against Russia or pro-West would be banned.³ While there were some objections not only from the civic but also even from the inside of the government,⁴ Beijing has decided to firmly bond with Moscow. Therefore, from *People's Daily* to *Global Times* as well *The Paper*, Russia is never to be blame for launching the war.

Having browsed these pro-Russian narratives widely, though there are various forms, anti-America constitutes a major principle throughout these massive reports and



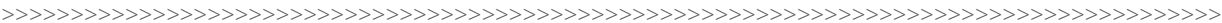
² Yuan Li, "How China Embraces Russian Propaganda and Its Version of the War," *The New York Times*, March 4, 2022, https://www.nytimes.com/2022/03/04/business/china-russia-ukraine-disinformation.html?_ga=2.101630657.1742666153.1652336778-920920579.1644916532; Paul Mozur, Steven Lee Myers, John Liu, "China's Echoes of Russia's Alternate Reality Intensify Around the World," *The New York Times*, April 12, 2022, https://www.nytimes.com/2022/04/11/technology/china-russia-propaganda.html?_ga=2.72214355.1742666153.1652336778-920920579.1644916532.
³ Jason Wu, zhong gongjia qiangfanmeiren zhizhanewuzhan zhengyi ranbu rongle guan [中共加強反美認知戰 · 俄烏戰爭依然不容樂觀, China Strengthens Anti-US Cognitive Warfare Operations. It is Still Not Optimistic to the Development of Russian-Ukrainian War]," *Ming ren tang*, April 6, 2022, <https://opinion.udn.com/opinion/story/120611/6218009>.
⁴ Ibid; Chris Buckley, "Defying China's Censors to Urge Beijing to Denounce Russia's War," *The New York Times*, March 18, 2022, <https://www.nytimes.com/2022/03/18/world/asia/china-ukraine-russia-dissent.html>; Lizzi C. Lee, "A Former Chinese Ambassador's Trenchant Comments on Ukraine War Attract Notice," *The Diplomat*, May 12, 2022, <https://thediplomat.com/2022/05/a-former-chinese-ambassadors-trenchant-comments-on-ukraine-war-attract-notice/>.

can moreover function by consolidating domestic citizens' support to the Party's policy.

CHINESE COGNITIVE WARFARE OPERATIONS AGAINST TAIWAN

Along with the Russian military onslaught and occupation of Ukrainian cities, discourses and comments saying or implying that Taiwan will meet the same destiny like Ukraine appeared immediately in Taiwan, China and overseas Chinese communities. Putting Russia-Ukraine and China-Taiwan together, these words essentially sought to warn the 'Taiwan independence force' that its failure was inevitable. Cross-Strait relations is entangled in the Russia-Ukraine conflicts.

Chinese cognitive warfare operations watchers and fact-checking organizations in Taiwan⁹ discerned that groups of pro-Communist local collaborators disseminate the defeatist ideas on the social media platforms including Facebook, YouTube, Line etc. Relatively, the negative role of the US was highly emphasized in the texts. For one thing, the Chinese posts centered on the relationship between the US and Azov regiment, framed as the Ukrainian far-right, suggested that the US as an "external force," was the main sponsor and backer behind these fundamentalists. The posts implied that Taiwan independence supporters were an analogy to the Ukrainian fundamentalists. For another, skepticism about the US support for Taiwan was stood out, given a fact that Biden Administration at the time expressed no plan sending military to help combat the invasion. The US behavior was then interpreted and distorted to a conclusion that once there was war in the Taiwan Strait, Taiwan would be abandoned to face the People's Liberation Army alone. The nature of US strategic ambiguity policy towards Taiwan was then argued to leave the island to die. In addition, images of damaged cities, broken houses, severe casualties were portrayed not only as empathy, but also as a manifestation of tragedy a small country dared to challenge a powerful neighbor. "Ukraine Today, Taiwan Tomorrow," a slogan soon showed up everywhere which intended to trigger Taiwanese sense of fear for their island's future. The national security-relevant units confirmed the idea that the CCP and its collaborators took the advantage of the war to



⁹ IORG, "e wu zhan zheng xia de zi xun cao nong: pi wu, pi mei, ting e, qi tai [俄烏戰爭下的資訊操弄：批烏、批美、挺俄、棄台, Informaiton Operations in the Russian-Ukrainian War: Criticism of Ukraine, Criticism of US, Support for Russia, Abandon of Taiwan]," IORG, March 3, 2022, <https://iorg.tw/da/21>; Jerry Yu, "zhong wen zi xun huan jing jiang wu ke lan na cui hua de fen xi [中文資訊環境將烏克蘭「納粹化」的分析, An Analysis of Ukraine Narrated as Nazi in Chinese Information Environment]," Doublethink Lab, March 31, 2022, <https://reurl.cc/7DNd9l>.

breach Taiwanese morale.¹⁰ With the war evolving fast, the manipulator also adapted the information content.



In the first days of war when Ukraine hit by the Russian fierce attack, A great deal of disinformation and fake news linked government in Kyiv and government in Taipei. One of them claimed that President Zelensky ran away to overseas, and one rumored that the Ukrainian troop surrendered without combating. A Chinese version of this fake news was added to a forged picture which contained distorted President Tsai Ing-wen's promise.

Such disinformation is believed looking for decreasing the Taiwanese confidence to the government and the national force. In addition, when the Ministry of Foreign Affairs embarked on withdrawing local Taiwanese in Ukraine, there was another operation from China. Briefly to say, some fake local residence who in fact lived in China at the time

FIGURE: Disinformation and Chinese Propaganda Involving Russian-Ukrainian War and Taiwan
(Source: YouTube; Tiktok; Weibo; TikTik; Taiwan FactCheck Center)

¹⁰ "EDITORIAL: Time to push for defense upgrade," *Taipei Times*, March 30, 2022, <https://taipeitimes.com/News/editorials/archives/2022/03/30/2003775688>.

Taiwan has against disinformation disturbance for years. Also, the evolving development of war affected the effects of information operation. "Ukraine Today, Taiwan Tomorrow" was originally used to intimidate Taiwan, but now given the Ukrainian successful resistance to the invasion, it is reversed to be an encouragement of fighting spirit in the new context. Even though, Taiwan is still unable to exempt from the multidimensional impacts brought by the war, in particular the supply chain disruption and inflation issues. To view from this aspect, consequently, the potential of manipulating economic crisis narrative exists, and which can be next wave of attack. we should keep eyes on!

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