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Foreign Interference: A Case Study from Australia

By Natasha Kassam

"Terrorism has never been an existential threat to established states," said Duncan Lewis, the head of Australian Security Intelligence Organisation (ASIO) at the Lowy Institute on September 5, 2019 in a rare public address for Australia's spymaster.

"The counter-espionage and foreign interference issue, however, is something which is ultimately an existential threat to the state, or it can be an existential threat to the state. It has the capacity to do that."

This unprecedented statement from one of Australia's leading public servants marks the elevation of foreign interference to new levels of public discourse. The debate has been murky: although Australian legislation has been careful to not point fingers at one country in particular, the majority of interference concerns, and statements by Australian political leaders, have been connected to Beijing. The heightened tensions around the China debate in Australia has also led to, unintentional or otherwise, blurring between legitimate means of influence and foreign interference. Finally, the language used by commentators around Chinese Communist Party interference has risked unfairly tarnishing the 1.2 million Australians that boast Chinese heritage.

¹ Duncan Lewis, "An Address by ASIO Director-General Duncan Lewis," September 5, 2019, Lowy Institute, https://soundcloud.com/lowyinstitute/an-address-by-asio-director-general-duncan-lewis .

This paper seeks to outline the shift in discussion around foreign interference and sharp power in Australia, discuss Australia's response to increasing concern about foreign interference in the context of Confucius Institutes in Australia, and finally, analyse the operation of Australia's Foreign Influence Transparency Scheme in the year since it was introduced on December 10, 2018.

Influence versus Interference

The expression "sharp power" has only been used since 2017, but reflects a longstanding practice. Sharp power refers to authoritarian regimes, for example China and Russia, investing in significant resources in media, academic, cultural, and think tank initiatives designed to shape public opinion and perceptions around the world.²

Liberal democracies have of course invested resources in the same way: these efforts have been traditionally thought of through the lens of "soft power." Previously, soft power referred to all forms of influence that were not "hard," i.e. military force or economic might.³ But these forms of authoritarian influence could no longer be considered as "soft," particularly in the context of younger democracies. The term "sharp power" has tended to refer to these efforts to pierce or infiltrate the information and political environments in the targeted countries. Whereas soft power tends to be focused on winning "hearts and minds,"

² National Endowment for Democracy, "Sharp Power: Rising Authoritarian Influence," December 5, 2017, https://www.ned.org/sharp-power-rising-authoritarian-influence-forum-report/.

³ Hideshi Tokuchi, "Countering Foreign Influence and Interference in Open Societies – A Japanese Perspective on Authoritarian Infiltration," *Japan Institute of International Affairs*, February 25, 2019.

sharp power seeks to influence democracies by "manipulating or distorting the information that reaches target audiences."⁴

But this distinction can be problematic when seeking to distinguish between legitimate expressions of public diplomacy and soft power, as opposed to illegitimate efforts to interfere or infiltrate. The 2017 Foreign Policy White Paper from the Australian government noted its concern about:

growing attempts by foreign governments or their proxies to exert inappropriate influence on and to undermine Australia's sovereign institutions and decision-making. Such attempts at foreign interference are part of a wider global trend that has affected other democracies. Foreign interference aims to shape the actions of decision-makers and public opinion to achieve an outcome favourable to foreign interests.⁵

What is particularly important in the definition offered by the Foreign Policy White paper is that the authors note all states seek to advance their interests through persuasion, as a central and legitimate task of diplomacy. But foreign interference is problematic because of the clandestine or deceptive nature of the influence, which affects political, governmental or even commercial processes to cause harm to Australian interests. This definition provides a guiding framework to ensure that we do not unnecessarily demonise or damage legitimate attempts to influence or shape Australian government policy.

⁴ National Endowment for Democracy, op. cit.

⁵ Department of Foreign Affairs and Trade, 2017 Foreign Policy White Paper, November 27, 2017, https://www.fpwhitepaper.gov.au/.

The Australian Case Study

The last two years have seen Australia's relationship with China shaken by allegations that the Chinese party-state is working to covertly manipulate the Australian political system. The claims started with the idea that political donors linked to Beijing were buying access and influence, and escalated to universities being considered as propaganda vehicles for the Communist Party. There have been revelations that Australian funded scientific research has directly supported the capabilities of to the People's Liberation Army.

The story started with Sam Dastyari, a Labor Party senator who was found to have received a small amount of money from a Chinese businessman. He later repeated the Chinese Communist Party position on the South China Sea, contrary to his own party's policy platform, and allegedly warned the same businessman that his calls may have been monitored by security services. This story ended with the Senator's resignation.⁶

More recently, in late November 2019, news reports suggested that Chinese intelligence operatives offered AUD 1 million to a Chinese Australian car dealer in Melbourne to run for federal parliament as the Liberal candidate for Chisholm. While there are serious questions of plausibility in this case, particularly as the practice of pre-selecting

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⁶ Katharine Murphy, "Sam Dastyari: senator recorded contradicting Labor on South China Sea," *Guardian*, 29 November, 2017,

https://www.theguardian.com/australia-news/2017/nov/29/sam-dastyarisenator-recorded-contradicting-labor-on-south-china-sea.

candidates in Australia makes directly placing somebody in the parliament nearly impossible.



China's President Xi Jinping addressing the Australian Parliament during his visit to Canberra on Nov 17, 2014. Mr Xi is visited Canberra after attending the G-20 Summit in Brisbane over the weekend. (Source: Strait Times)

The last two years have seen many other allegations of this nature. This paper will not consider the many cyberattacks that Australia has experienced during this period, many of which have been attributed in the media to China. This is because cyberattacks between countries could potentially be considered to be a traditional form of espionage, whereas this paper is considering new and revised forms of foreign interference.

Australia has taken a range of measures in response to this perceived threat, some of which were long overdue, such as banning political donations from foreign citizens. The Australian government has committed AUD 38.8 million since 2018-19 to counter foreign interference, including to establish a Foreign Interference Threat Assessment Centre in the Australian Security Intelligence Organisation and extra funding to support criminal prosecutions under new foreign interference offences.⁷

The most notable is the Foreign Influence Transparency Scheme (FITS), which commenced on December 10, 2018. According to Australia's Attorney General's Department, the FITS is to provide the public and government decision-makers with visibility of the nature, level and extent of foreign influence on Australia's government and political process.⁸

The scheme introduces registration obligations for persons and entities who have arrangements with, and undertake certain activities on behalf of, foreign principals. Whether a person or entity is required to register will depend on who the foreign principal is, the nature of the activities undertaken, the purpose for which the activities are undertaken, and in some cases, whether the person has held a senior public position in Australia. The scheme exempts parliamentarians from registration obligations, which has been controversial.

It is early to assess the effectiveness of the scheme, as it has only been in place for one year. There have been approximately 200 entities that have

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⁷ Prime Minister, Minister for Home Affairs, and Minister for Defence, Australia, "Stepping up Australia's Response against Foreign Interference," December 2, 2019, https://www.pm.gov.au/media/stepping-australias-response-against-foreign-interference.

⁸ Attorney General's Department, Foreign Influence Transparency Scheme, Australia, https://www.ag.gov.au/Integrity/foreign-influence-transparency-scheme/Pages/default.aspx .

registered, including individuals that sit on foreign boards, think tanks and research institutions that receive foreign funding and companies or organisations that have joint ventures with foreign entities.9

The scheme has not captured many of the original examples that were touted as egregious levels of influence. The original donations from Huang Xiangmo to Sam Dastyari would now be prohibited as foreign donations are banned, but his conduct as a Senator would not be registrable under the Foreign Influence Transparency Scheme members of parliament are exempt. The Australia-China Relations Institute at the University of Technology Sydney, which was also founded by a donation from Huang Xiangmo, is also not registered on the scheme.

Where the scheme has worked, however, is to provide a deterrent effect on public institutions that have previously accepted funding from foreign sources. Public institutions that rely on donations can be seen to be interrogating funding sources in a previously unprecedented manner, with particular organisations taking decisions to not accept any funding from foreign governments. This is in part a useful consideration as to whether donations come with political strings attached, and in part adding to bureaucratic complications. In some cases, this level of scrutiny can be overdone: some research organisations have been careful about accepting offers of travel and accommodation costs to attend international conferences, which are part and parcel of being engaged in international relations or economic work.

⁹ Ibid.

Confucius Institutes

Confucius Institutes are another key example as to where there have been questions as to whether the scheme is working. Confucius Institutes are affiliated with China's Ministry of Education, but are thought to have deep ties to the United Front Work Department of the Chinese Communist Party. ¹⁰ Confucius Institutes have two types of programs: embedded in universities and in primary schools.

The Australian state of New South Wales (NSW) recently decided to terminate its arrangement with the Confucius Institutes from the end of the 2019.¹¹ This decision was based on the potential for the perception that the Confucius Institute is or could be facilitating inappropriate foreign influence in the department. The NSW Department of Education review found that this department was the only government department in the world that hosts a Confucius Institute, and that this arrangement placed Chinese government appointees inside a NSW government department.¹²

¹⁰ Amy Searight, "Chinese Influence Activities with US Allies and Partners in Southeast Asia," Testimony before the US-China Economic and Security Review Commission, April 5, 2018, https://csis-prod.s3.amazonaws.com/s3fs-public/publication/180406_Hearing_Amy%20Searight_Written_Statement_April %205%202018.pdf?u6.PMk9Xjxi7ojAhLXImnv_OciYnjHE3y.

New South Wales Department of Education, https://education.nsw.gov.au/about-us/strategies-and-reports/our-reportsand-reviews/review-of-foreign-government-organisation-support-forlanguage-education/our-response-to-the-review-report.

New South Wales Department of Education, Review into Foreign Government/Organisation Support for Language Education in New South Wales Government Schools, https://education.nsw.gov.au/about-us/strategies-and-reports/media/documents/Report-with-attachments.pdf.

The Chinese Consulate-General in Sydney released a statement seeking clarification for the decision, noting that the NSW Department of Education found no evidence of actual political influence through its Confucius Institute program.¹³



The picture shows the official opening of CMCI by H.E. Mr. XI Jinping, President of P. R. China. (Source: Nanjing University of Traditional Chinese Medicine)

The Institutes are empowered to teach Chinese language and culture, but there are allegations that they are "spreading China's political agenda, suppressing academic debate and stealing vital academic research."¹⁴

A key example of where public concerns have surfaced about a Confucius Institute is in relation to the University of Queensland, where the Vice-Chancellor Peter Hoj was also a consultant to Hanban, the

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¹³ "Remarks by the Spokesperson of the Chinese Consulate General in Sydney," August 23, 2019, http://sydney.chineseconsulate.org/eng/xwdt/t1691262.htm.

¹⁴ Searight, "Chinese influence activities."

organisation that administers the Confucius Institute.¹⁵ The Confucius Institute, in addition to teaching Chinese language course, funds and designs a number of courses at the University of Queensland. One such course was an Understanding China economics course that included a week on "China's Legal Response to Terrorism,"¹⁶ which has referred in official Chinese statements to the detention of over one million Uighurs in Xinjiang. Australian universities hosting Confucius Institutes have signed agreements explicitly stating they must comply with Beijing's decision-making authority over teaching at the facilities.¹⁷

The University of Queensland was also the site of a Hong Kong protest on July 24 which turned violent, with clashes between pro- and anti-Beijing students. The organisers were subsequently accused by China's consul-general in Brisbane, Xu Jie, of being "separatists" and "anti-China activists." The public statement by the Chinese consul-general, which also praised the "spontaneous patriotism" of the pro-Beijing students, generated significant criticism in Australia.

¹⁵ Ben Packham, "University of Qld agreed to promote China Institute, didn't disclose," *The Australian*, July 26, 2019,

 $https://www.theaustralian.com.au/nation/politics/university-of-qld-agreed-to-promote-china-institute-didnt-disclose/news-story/7e21ed98ec95530842500370c4c44c25\ .$

Drew Pavlou, October 14, 2019, https://twitter.com/DrewPavlou/status/1183498851010793475?s=20.

Fergus Hunter, "Universities must accept China's directives on Confucius Institutes, contracts reveal," July 25, 2019, *Sydney Morning Herald,* https://www.smh.com.au/politics/federal/universities-must-accept-china-s-directives-on-confucius-institutes-contracts-reveal-20190724-p52ab9.html .

¹⁸ Jamie Smyth, "Australia: the campus fight over Beijing's influence," *Financial Times,* November 12, 2019, https://www.ft.com/content/f56fce50-ff13-11e9-b7bc-f3fa4e77dd47.

This is by no means a new issue. In 2013, the University of Sydney attempted to relocate an address by the Dalai Lama off-campus, but eventually backed down after critics claimed the university was seeking to appease the Chinese government.¹⁹ The previous year, the Confucius Institute at Sydney University had hosted a public lecture by Zhang Yun, a staunch critic of the Dalai Lama.²⁰

International Students

The issue of Confucius Institutes is often conflated with that of international students in commentary about foreign interference. The concern about Confucius Institutes is based upon the suggestion that the Chinese government has the ability, in some courses, to shape educational standards and spread political propaganda to all students, international or otherwise. But international students have raised separate concerns: there are allegations that Beijing is monitoring its own citizens on overseas campuses and directing some of them to develop research in areas such as artificial intelligence and cyber security, for the benefit of the Chinese party-state on return.²¹ Students and professors from Australian universities have developed and researched artificial intelligence, through the Australian taxpayer-

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¹⁹ *ABC News*, "University has change of heart on Dalai Lama visit," April 23, 2013, https://www.abc.net.au/news/2013-04-23/university-of-sydney-to-host-dalai-lama/4647110

²⁰ Jackson Kwok, "Is There a Problem with Confucius Institutes in Australia," *China Matters*, May 2018, http://chinamatters.org.au/wp-content/uploads/2018/08/China-Matters-Explores-07-May-2018-Confucius-Institutes-with-Feedback.pdf.

²¹ Phillip Coorey, "ASIO warns vice chancellors over Chinese spies on campus," *Australian Financial Review,* October 18, 2017,

https://www.afr.com/politics/asio-warns-vice-chancellors-over-chinese-spies-on-campus-20171018-gz32ax .

funded Australian Research Council, which has then been used in for surveillance in China's Xinjiang region.²²

There are approximately 140,000 Chinese university students in Australia. Chinese university students make up approximately 23% of the total revenue at the University of Sydney, as an example. Australian universities have been described as overly reliant on international students. A study by the Centre for Independent Studies showed that the most successful American public universities would generally aim for approximately 10% of its student body to be international, to add diversity and expose students to their peers from around the world. The same study shows 15% is the maximum reasonable level, and 20% represents "internationalisation gone wild." The average level of international students across the entire university system in Australia is 26.7%, far higher.²³

The issue of international students and potential foreign interference in Australia is therefore also tied up in Australia's economic interdependence with China. Foreign students contributed AUD 32 billion to Australia's economy in the year to the end of June 2018.²⁴ China is Australia's largest trading partner.

Alex Joske, "The Company with Aussie Roots That's Helping Build China's Surveillance State," *The Strategist*, Australian Strategic Policy Institute, August 26, 2019, https://www.aspistrategist.org.au/the-company-with-aussie-roots-thats-helping-build-chinas-surveillance-state/.

²³ Salvatore Babones, "How Many International Students Are Too Many?" The Centre for Independent Studies,

https://www.cis.org.au/commentary/articles/how-many-international-students-are-too-many/ .

²⁴ Smythe, op. cit.

Canberra's focus on rooting out foreign interference, first in politics and now universities, has alarmed some elements of the Australian community, who warn it risks labelling all Chinese students as spies, promoting xenophobia and causing irreparable damage to bilateral relations with China, with two-way trade worth AUD 213 billion last year. But critics counter that universities are turning a blind eye to Beijing's alleged interference on campus because the sector has become dependent on Chinese money.

The Australian government has started to take steps in this area. On August 28, 2019, the Minister for Education, Dan Tehan, announced the establishment of a University Foreign Interference Taskforce.²⁵ He also released a guiding framework for the development of best practice guidelines to counter foreign interference in the Australian university sector.²⁶ The guidelines were developed in partnership between the government and the university sector.

Enforcement

Governments around the world have looked to the Australian experience as an example of how to counter foreign interference. Some Chinese academics have commented that "Australia is the pioneer of a global anti-China campaign."²⁷

Department of Education, Australia, "Establishment of a University Foreign Interference Taskforce," https://www.education.gov.au/news/establishment-university-foreign-interference-taskforce.

Department of Education, Australia, "Development of University Foreign Interference Taskforce - Guiding Framework," https://docs.education.gov.au/node/53040.

²⁷ Eryk Bagshaw and Rob Harris, "China claims Australia the 'pioneer' of a global anti-China campaign," *Sydney Morning Herald,* September 24, 2019,

But enforcement of Australia's new scheme to manage foreign interference has been almost non-existent to date. The foreign influence transparency scheme allows for the Attorney General's department to issue a transparency notice confirming that a person is a foreign government-related entity or foreign government-related individual, which then requires the persons undertaking registrable activities on behalf of the foreign principal to register.

According to public records, only one such transparency notice has been issued to date: to former Australian Prime Minister Tony Abbott, prior to addressing a Conservative Political Action Conference. Mr. Abbott declined to register, and there have been no known consequences of his failure to comply with the notice.²⁸

The Attorney General's Department has also been in discussions or correspondence with several other Australian organisations to determine whether they are required to register under the scheme. Education Minister Dan Tehan has said that "The attorney-general has asked his department to specifically examine the arrangements between Confucius Institutes and universities in order to ensure compliance with the [scheme]. The Australian government expects our universities to have robust mechanisms in place to ensure international education partnerships comply with Australian laws, education quality standards and academic freedoms."²⁹

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https://www.smh.com.au/politics/federal/china-claims-australia-the-pioneer-of-a-global-anti-china-campaign-20190924-p52ufk.html.

²⁸ Australian Associated Press, "Tony Abbott says he was asked to register as a foreign influencer," *The Guardian,* November 2, 2019,

https://www.theguardian.com/australia-news/2019/nov/02/tony-abbott-says-he-was-asked-to-register-as-a-foreign-influencer-before-cpac.

²⁹ Paul Karp, "Government to assess regulation of Chinese influence at universities," *The Guardian*, July 25, 2019,

It is an offence under the legislation to undertake registrable activities while not being registered, failure to fulfill responsibilities, providing false or misleading information or destroying records in connection with the scheme. The penalties can be as serious as five years imprisonment.³⁰

Although the existing measures are yet to be enforced in a meaningful way, the government appears to be energised in its efforts to deter and detect instances of foreign interference. The Prime Minister announced on December 2, 2019, a new Counter Foreign Interference Taskforce, which will work with ASIO, Australian Federal Police, Australian Signals Directorate and Australian Transaction Reports and Analysis Centre (AUSTRAC).³¹ It is too early to understand how this body will operate, but the ongoing announcements and commitment of funding highlights the importance with which foreign interference is being treated by the highest levels of the Australian government.

Democracies likely cannot be entirely inoculated against actors that wish to interfere. But people can be educated, people can be made aware of the risks, and most importantly, people can question propaganda and distinguish between what is real and what is fake. Resilience and bolstering of our democratic values in open societies will be as

https://www.theguardian.com/australia-news/2019/jul/25/government-to-assess-regulation-of-chinese-influence-at-universities.

³⁰ Attorney General's Department, Australia, "Foreign Influence Transparency Scheme – Factsheet 17," February, 2019,

https://www.ag.gov.au/Integrity/foreign-influence-transparency-scheme/Documents/fact-sheets/penalties-for-non-compliance-enforcement.pdf.

³¹ Prime Minister et al., op.cit.

important as the passage of legislation in countering foreign interference.

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In the Light of a China Clouding Era: A Glance at Australia's Strategic Landscapes in the South Pacific

By Oddis Tsai

Introduction

China has outrun the US as the country which has the most diplomatic posts worldwide in 2019.¹ By gaining 7 more allies defected from Taiwan's side since 2016, China now runs 276 diplomatic posts globally, three more than the US.² Such outrun not just reflects Beijing's ambition to expand its global reach but also provides a clear message that Taiwan's international space is the last stronghold related to China's ultimate "win" in a US-predominant world. In particular, the area that lies in between two giants is the South Pacific.

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¹ Ben Westcott, "China has overtaken US as world's largest diplomatic power, think tank says," *CNN*, November 27, 2019,

https://edition.cnn.com/2019/11/26/asia/us-china-diplomacy-lowy-intl-hnk/index.html; Bonnie Bley, "The New Geography of Global Diplomacy China Advances as the United States Retreats," *Foreign Affairs*, November 27, 2019, https://www.foreignaffairs.com/articles/china/2019-11-27/new-geography-global-diplomacy.

² Those former allies of Taiwan include Sao Tome and Principe (2016), Panama (2017), the Dominican Republic (2018), Burkina Faso (2018), El Salvador (2018), the Solomon Islands (2019) and Kiribati (2019). The number of Taiwan's allies downsized from 22 in 2016 to 15 in 2019.

The South Pacific has long represented the strategic gateway for the US to enter the Indo-Pacific waters and hence significant to the defence of Australia homeland and other US allies along the Pacific Island chains. This op-ed introduces a strategic outlook from Down Under and China's looming economic power to the island-dotted region.

The South Pacific

The South Pacific comprises fourteen countries, including nine sovereign states and five freely associated countries.³ Samoa, Nauru, Tonga, Fiji, Papua New Guinea,⁴ Solomon Islands, Tuvalu, Kiribati and Vanuatu are fully independent. The other five enjoy different degrees of autonomy according to their agreements with regional powers, which are responsible for their defence and security respectively. Federated States of Micronesia, Marshall Islands and Palau sign the "Compacts of Free Association (COFA)" with the United States. The US Office of Insular Affairs (OIA) offers financial assistance through COFA frameworks, in return for the exclusive rights of US to operate military bases on these islands. Cook Islands (1965) and Niue (1974) become self-governing in free association with New Zealand within similar arrangements.

Australia, New Zealand, the US and France, these four western powers traditionally play a more predominant role in this part of the world. They form the "Quadrilateral Defence Coordination Group" (Oceanian QUAD) to foster multilateral approaches in order to tackle traditional and non-

³ The South Pacific is a terminology within the Taiwanese context. It is sometimes called otherwise due to different strategic outlooks from alternative countries. For instance, the US and Japan may refer to this vast area as the four adjacent theaters in the Pacific War, namely the North Pacific, Central Pacific, Southwest Pacific, and South Pacific.

⁴ Papua New Guinea is also known as PNG.

traditional security challenges, such as Niue Treaty. ⁵ Notably, the Oceanian QUAD states hold ten overseas territories in Oceania where 43% of the US Exclusive Economic Zone (EEZ) locates.⁶

Australia's Strategic View over the Region

From Canberra's perspective, there are three primary strategic interests corresponding to the three-layered concentric circles of Australia's defence.

Firstly, the Australian Continent with secure northern approaches and proximate sea lines of communication, this part comprises of the mainland and the north arc, namely Indonesian archipelago along with adjacent Melanesia. The northern arch is the gateway of those trade routes to Asia and security channels to Japan at the First Island Chain and those US bases in the Second and Third Island Chains.

Secondly, peace and stability in South East Asia and the South Pacific, this part connects South China Sea, Indian Ocean and the Arabian Sea in the west, as well as maritime transportation to North and South America in the east. Lastly, a stable Indo-Pacific and rule-based global order, this

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⁵ Pacific Islands Forum Fisheries Agency (FFA), "Niue Treaty," https://www.ffa.int/taxonomy/term/451

⁶ The ten territories include Guam (US), Northern Mariana Islands (US), Wake Island (US), American Samoa (US), Hawaii (US), New Caledonia (France), Wallis & Futuna (France), French Polynesia (France), Tokelau (NZ) and Norfolk Island (Australia) in addition to UK's Pitcairn Islands and Chile's Easter Island. "Coast Guard, Navy Complete Joint Oceania Maritime Security Initiative Patrol in Pacific Ocean," U.S. Indo-Pacific Command, May 1, 2018,

https://www.pacom.mil/Media/News/News-Article-View/Article/1509299/coast-guard-navy-complete-joint-oceania-maritime-security-initiative-patrol-in/ .

part implies that Australia tends to maintain the strategic status quo it has been enjoyed since the Pacific War.⁷

Canberra perceives the security of its immediate neighbourhood of the northern arch equally crucial as its homeland because Australia's long coastal line is almost indefensible for its 2.3 million population. Any external power's attempt to project influence into this region would be seen as a potential threat due to its empirical instincts from the past. Moreover, any attempt to block the US access to South Pacific would legitimately be seen as latent hostility simply because of Australia's long strategic tradition to rely on an Anglo-Saxon predominant power.

China's Trial in the Deep Waters

China's silent immersion into the South Pacific has not raised the alarm to the Australian public until recent years. Such powerful influence which China now possesses in the South Pacific, with an intent to pursue interests of the largest autocracy on earth, may sometimes be referred to the term "sharp power," implying a disrupting nature of such power to the regional status quo. Intriguingly, under these circumstances, Taiwan's diplomatic footprints in the region turn out to be an unexpected indicator of such penetration.

China's "Belt and Road Initiative" (BRI) has articulated that the South Pacific is a part of the blue economic passages, leading China's way to the open ocean.⁸ However, due to the lack of proper risk assessment, those BRI plans sometimes lead to soaring debt for local countries. Tonga is

⁷ *Defence White Paper 2016,* Department of Defence of Australian Government, 2016, https://www.defence.gov.au/WhitePaper.

⁸ "China proposes 'blue economic passages' for maritime," *China Daily*, June 21, 2017, https://www.chinadaily.com.cn/business/2017-06/21/content_29825517.htm .

heavily indebted to China by over 25% of its GDP, followed by Samoa's 20% and Vanuatu's 17% strong.⁹ The Marshall Islands, Tuvalu, Nauru, and Palau, these diplomatic allies of Taiwan are currently the only four island nations in the region which have not joined the BRI. Moreover, China's total trade with Taiwan's regional allies (USD 3.8 billion) has exceeded that of its own allies in the region (USD 3.5 billion) since 2017. ¹⁰ Bilateral trade indeed gives Beijing growing leverage over Taipei's regional friends.

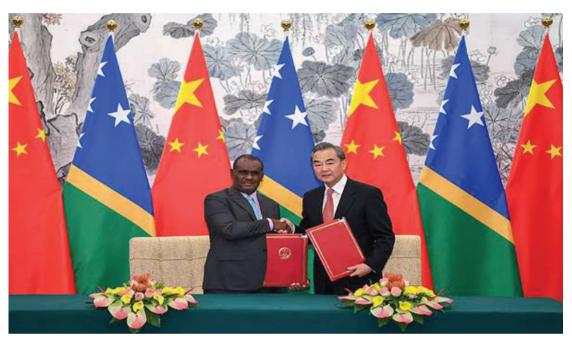
If one looks at the locations, Taiwan's four allies in the region lie in the midway between Australia and Hawaii, three in Micronesia (Palau, the Marshall Islands, and Nauru) and one in Polynesia (Tuvalu). Interestingly, China's ten diplomatic allies in contrast rest on the strategic nodes on the second and the third island chains, naturally covering the conjunction points of submarine cables across the ocean (Australia-Guam-Japan and Australia-Hawaii-US west coast).

⁹ Jamie Smyth, "China warned to reform its lending to indebted Pacific Islands," *Financial Times*, October 20, 2019, https://www.ft.com/content/3a53131a-f2d5-11e9-b018-3ef8794b17c6.

¹⁰ China's trade with the Marshall Islands and Papua New Guinea comprised 72% of its total trade with PIF members. Ethan Meick, Michelle Ker & Han May Chan, "China's Engagement in the Pacific Islands: Implications for the United States," Staff Research Report, U.S.-China Economic and Security Review Commission, June 14, 2018, p.7,

 $https://www.uscc.gov/Research/china\%E2\%80\%99s-engagement-pacificislands-implications-united-states\;.$

Signficantly, China has become the second-largest donor to the South Pacific since 2011 with USD 5.88 billion worth of aid, catching up Australia's USD 6.72 billion, with Beijing's commitment of USD 4 billion aid in 2017 alone. China could replace Australia in the near future if it keeps going on the same track.¹¹



China and the Solomon Islands signed a joint communique in Beijing on Sept 21 on the establishment of diplomatic relations. (Source: The State Council of P.R.C)

Last but not least, a rarely mentioned strategic importance of the Pacific, lies in the deep ocean—marine-based rare earth. Researchers have found 78 sites in the region with rare-earth concentrations of about 0.2%. At such concentration, one square kilometre of sea-floor mud could suffice to meet one-fifth of the world's annual rare-earth

intl/index.html. "Pacific Aid Map," Lowy Institute,

https://pacificaidmap.lowyinstitute.org/.

¹¹ James Griffiths & Ben Westcott, "China could overtake Australia as biggest donor to Pacific, if it pays up," *CNN*, August 9, 2018, https://edition.cnn.com/2018/08/09/australia/china-pacific-aid-belt-road-

demand.¹² Despite the immaturity of seabed mining technologies at the moment, a possibility of the South Pacific being enmeshed into power struggles in terms of resource control in a near future should not be ignored, particularly referring to the looming Sino-American "Tech War" we have witnessed today.

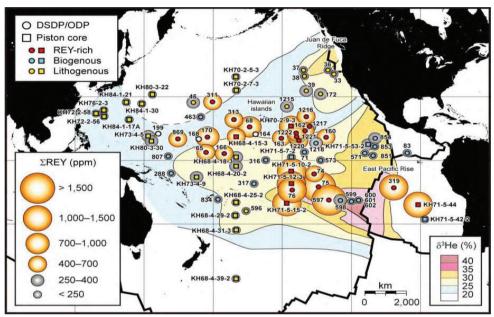


Figure 1. REY (rare-earth elements and yttrium) Seabed Reserves

(Source: Yasuhiro Kato, "Deep-sea mud in the Pacific Ocean as a new mineral resource for rare-earth elements," Frontier Research Center for Energy and Resources Graduate School of Engineering, The University of Tokyo,

https://www.pecc.org/resources/environment-1/1923-deep-sea-mud-in-the-pacific-ocean-as-a-new-mineral-resource-for-raw-earth-elements/file)

Conclusion

Australia, with its special geological and demographical figures, depends on a secure immediate neighbourhood to keep hostile power offshore. Therefore, the island-spread South Pacific means not only layers of protection to its homeland, but also passages to connect major allies. A

Yasuhiro Kato et al., "Deep-sea mud in the Pacific Ocean as a potential resource for rare-earth elements," *Nature Geoscience*, July 3, 2011, pp. 535–539, https://www.nature.com/articles/ngeo1185.

more dominating role of China in the region would eventually mean the demise of US presence in the First and Second Island Chains, leaving the democratic world in the West Pacific defenceless.

It is noteworthy that Taiwan's diplomatic presence is turning into "the canary in the coal mine" in the South Pacific nowadays. This metaphor implies that such an identity could be a natural barrier against China's influence. More and more like-minded countries, including Australia, start to realise a fact that a blow of cutting ties with Taipei will not just suffocate Taiwan with thinner diplomatic air, but also eventually ring the bell to the region for the looming Chinese atmosphere.

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Current Problems of Germany's Armed Forces

By Wilfried von Bredow

Big and complex organisations inevitably face various kinds of problems. The armed forces of Germany, known as the Bundeswehr, is certainly a big and complex organisation. After the end of the East-West conflict, the German government pursued a policy of reforming the Bundeswehr, which implied a quasi-permanent downsizing of both the budgets per year and the number of soldiers. The motive behind this policy was a mixture of necessities concerning the adaptation of the armed forces to the new (but somewhat unclear and confusing) strategic environment and of rather illusionary expectations of a "peace dividend" and a less conflictual international system.

In 1985, the Bundeswehr was comprised of ca. 495,000 soldiers (about 45% having been drafted). Furthermore, ca. 180,000 civil employees were dealing with administrative and other non-military aspects of the organisation. In those days, the Bundeswehr was a comparatively strong conventional (=decidedly non-nuclear) part of the North Atlantic Treaty Organization's (NATO) strategy of deterrence plus, if deterrence would fail, the determination to defend the territory of West Germany and the territories of its allies. The end of the East-West conflict nullified this strategic framework. Subsequently, the three decades after 1990 were characterized by various attempts to define new tasks and missions for the armed forces, in accordance with NATO and in prospect of an evergrowing political and military integration of the European Union. The various reform steps, transformations, and re-prioritizing developed into a painful crisis of confidence in and self-confidence of the

Bundeswehr. Its current size is much smaller than at the end of the East-West-conflict: ca. 180,000 soldiers, including ca. 8,500 short-term volunteers. To break it down, ca. 61,000 soldiers serve in the Army, while ca. 28,000 are in the Air Force and ca. 16,000 in the Navy. The Medical Service of the Bundeswehr contains approximately 20,000 soldiers and the Joint Support Service about 27,500 soldiers. Since 2017, the so-called Cyber- and Information Room (CIR) exists as a separate organisation domain with nearly 13,000 soldiers at this point in time. Slightly more than 22,000 soldiers of all branches of the Bundeswehr are female. In addition, the number of civil employees of the armed forces has dropped to around 70,000.

The main problems of the Bundeswehr result from unclear concepts about its military doctrine and priorities, deficits with the procurement of arms and military equipment, from bureaucratic self-blockades, and from the rather unique legal basis of its military missions. A fourth problem arises from the also rather unique public reluctance to accept the armed forces as a legitimate instrument for the defence and assertion of the national interest. To avoid misunderstandings, the Bundeswehr and its soldiers are certainly highly esteemed by the majority of the German people. This general support includes a high rate of consent with all kinds of humanitarian and non-military missions. However, it does not extend to genuine military missions of the Bundeswehr. A case in point is the public reluctance to identify with the Bundeswehr mission as part of ISAF (International Security Assistance Force) in Afghanistan.

NATO and European Union

The Bundeswehr is firmly anchored in two alliances – NATO and the Common Security and Defence Policy (CSDP) of the European Union. The problem is that these two multilateral alliances, despite all their

institutional links, are based on different political interests and different military capacities. US-dominated NATO serves, first and foremost, American interests but is still regarded as an efficient protection shield for Europe against military pressures, e.g. by Russia. The European Union, on the other hand, is everything but a military union, and its many attempts to create a common defence and security policy and a common European army remain patchwork at best. Traditionally, German governments pursue a balancing act between these partly overlapping but often arduously reconcilable alliances. Over the last years, the Trump administration has not make things any easier.



NATO Secretary General Stoltenberg and the state secretary Defense of Germany, Dr. Peter Tauber. (Source: NATO)

On the domestic level, the Bundeswehr is deeply embedded in political structures that are intended to guarantee the primacy of civil politics. As such, every mission of the Bundeswehr out-of-area (beyond the territory of NATO) must be approved by the German Parliament. These staunch

ties developed since the mid-1950s when the Bundeswehr was founded. Civil and democratic control of the armed forces is a positive achievement in Germany's military history. Its downside, however, is a widespread conviction that Germany does not really need the military as an instrument of politics. Consequently, in view of security problems and military conflicts, the military strategic discourse in Germany is often weak and confused.

New Wine in Old Skins

Recently, some things have changed. The relatively small strategic community in Germany has tried to initiate a debate on a more active security and defense policy and on a more visible role of the armed forces. The speeches of Federal President Joachim Gauck, Foreign Minister Frank-Walter Steinmeier, and Defense Minister Ursula von der Leyen at the Munich Security Conference in 2014 announced a farewell to the policy-guiding principle of 'civil power' without military teeth. This announcement was a clear signal, but it did not seem strong enough to bring about the necessary conceptual changes – despite many administrative attempts, some of which are documented in the White Paper of 2016 and in the new Conception of the Bundeswehr of 2018. Unfortunately, these documents remain mostly on the level of targets and advertisements. The style and dynamics of Germany's security and defense policy did not really change. In addition, the Bundeswehr sank into a swamp of combined crises.

The over-arching and most salient difficulty which strained the professional daily life of the Bundeswehr and its soldiers over the past ten, fifteen years and threatens to do so in the years ahead is centred around the deep-rooted structural problem of a paralysing bureaucracy. Its debilitating effects cripple the individual sense of responsibility and

discourage creative and courageous initiatives by soldiers and civil employees.

Self-Perception and Military Tradition

Meanwhile, the inner-organizational atmosphere of the Bundeswehr appears to be overshadowed by a widespread feeling of uneasiness. This is the result of strong pressures from the ministry in Berlin which are intended to implement a "politically correct" collective self-perception of the Bundeswehr soldiers and to cut off nearly all reminiscences of former German militaries. It is certainly necessary to keep the concept of (democratic) "citizen in uniform" and the principles of "Innere Führung" (internal leadership philosophy) alive and to adapt them to new social, political and military environments. However, to drastically cut professional ties to the military past is counterproductive and harms the self-esteem of soldiers. The professionalism (certainly not the political orientation) of the Wehrmacht enjoys a good reputation among soldiers of allied forces. When Bundeswehr contingents serve together with them (in international Headquarters or in stabilization missions like ISAF), they are often bewildered by their respect for Wehrmacht generals like Rommel and others.

The internal debates on these value-oriented issues seems to have developed into a kind of malaise. The ministry has strongly intervened in some of them, e.g. the fostering of some military traditions. These interventions may have been intended as an input for debate, but many soldiers regarded them as a kind of bureaucratic language rule.

Hardware Problems

This leads us back to the structural problem of bureaucracy in the military organisation. Most observers of the Bundeswehr agree that it has lived through difficult times. A critical report about the manoeuvrability of the Bundeswehr recently concluded that there are not enough personnel and that the troops are far from being fully-equipped. Tanks, ships, and aircraft ready for deployment are a scarce resource. As the Parliamentary Commissioner for the Armed Forces (Wehrbeauftragter) remarked in his recent report (January 2019), the actual availability of these arms systems is well below 50 %. Helicopters (NH-90, Tiger and CH-53) do not fly. Combat aircraft (Eurofighter and Tornado) are unable to leave the ground. The central weapon system of the army, the battle tank Leopard 2, spends more time in the repair garage than in the training area. In 2010, the Bundeswehr ordered 350 units of the infantry tank Puma. Nine years later, 176 of them have been delivered, yet only 48 of them are in functioning order.



A Tornado IDS fighter plane lands at Al-Asrak, Jordan, at the Counter Daesh mission. (Source: German Air Force)

The navy struggles with particularly tough hardware problems: none of their submarines was fully operational in 2018, which means, among other things, that the submarine crews lack full training. When the first of four very expensive Frigates 125 was launched in 2014, it could not be deployed because of severe technical issues. It took another five years until it was capable of being put into service. There are, however, problems with the crew training for this highly complex vessel because the naval authorities failed to make provisions for the necessary training centre. It will take years to repair this omission. The scandal surrounding the navy's three-masted training ship Gorch Fock is not so significant in terms of military combat efficiency, but indeed very significant as an iconic status-symbol of the navy. The price tag for its overhaul rose from € 10 million (2015) to € 135 (2019).

The list of hardware problems of the Bundeswehr is much longer. The dangerously poor equipment used by soldiers was already obvious during the ISAF-mission of Bundeswehr contingents in northern parts of Afghanistan. Since more than a decade, the armament problems have been hotly discussed among military experts. In December 2013, Ursula von der Leyen became Defense Minister. She displayed determination and put forth very vigorous reform plans in order to overcome the unfortunate situation of the Bundeswehr. However, one of her first drastic actions to show strong leadership went completely wrong. She emphatically announced that the standard rifle of the Bundeswehr G36 would have to be taken out of service due to reports that it did not function in a fail-safe manner. This assessment turned out be premature, and, after countless internal debates and some court proceedings with the manufacturing company, the G 36 was rehabilitated to a certain extent. Up until today, the Bundeswehr is not certain whether and when the soldiers will get another standard rifle.

Nearly six years after von der Leyen's incumbency, the poor condition of the hardware situation has become even more unfortunate. All attempts to master the difficulties, e.g. with the help of expensive consulting firms, backfired. Major weapon and equipment systems could not be repaired because the required spare parts were unavailable. Meanwhile, harsh critics continue to call the Bundeswehr a scrap heap (*Schrotthaufen*). A high-ranking German officer has been quoted as saying, "No matter where you look, there's dysfunction." Nevertheless, even if this and comparable statements are a bit too harsh, the general disappointment among Bundeswehr soldiers is immense. There is a wide gap between the ambitions of the government to present the Bundeswehr as a strong and reliable pillar of Germany's as well as Europe's security, on the one side, and the sad reality, on the other.

Negligence Syndrome

The military organization does not run smoothly. The best efforts of many officers and rank and file soldiers on the troop level are partly devaluated by structural shortcomings. This development is beyond reason when we rely on mono-causal explanations. Instead, we have to surmise a contradictory negligence syndrome with deep roots in the immediate post-Cold War years. It is a syndrome because several negative factors come together and produce mutually reinforcing effects crucial to the performance of the armed forces. It is contradictory because security policy and its military muscles do play a growing role in international politics, especially on the European level.

Some important aspects of these negative factors are:

- the defective politico-strategic discourse about the purpose of the armed forces;

- the flawed and over-optimistic self-perception of their leadership;
- the strong pressure on critical voices that created a selfindulgent spirit of conformity among their leadership;
- bureaucratic petrification where fresh and experimental initiatives should be in demand:
- internal miscommunication and heaviness:
- the structurally weak position of the military in comparison with the representatives of the armament industry during procurement processes;
- financial mismanagement;
- missing cost-effectiveness strictness;
- the widespread resignation among the soldiers on the middle and lower levels of the hierarchy.

This negligence syndrome is kept alive bolstered by two contradictions: the first main contradiction involves proclamations by the political leadership for ambitions guidelines concerning the Bundeswehr and their failure to implement them. The most salient example for this attitude is the often-repeated pledge of the chancellor and the various defense ministers to increase the military budget to the NATO standard of 2% of the GDP. This is a public-relations act and not much more (even if, indeed, the military budget is now rising and would reach approximately 1.35% in 2019). To be clear about this point, the problem is not the money. The 2% benchmark is certainly disputable. However, to repeat the determination to get there without really knowing how to get there destroys one's credibility.

The second main contradiction is the lack of strategic priorities expressed by the illusion of a "European army" and the claim for

leadership in European security policy. For the time being, neither the German government (not to mention the German public) nor the Bundeswehr are ready to tackle these targets.

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China's Next-Generation Missile: The DF-17 in Pacific Conflict and Great Power Competition

By Cameron Freeman

Introduction

Hypersonics are frequently described as a game changer. Military officials, researchers, and security experts have for years highlighted hypersonic glide vehicles (HGVs) and scramjet-powered cruise missiles as technologies which could fundamentally alter the balance of a conflict; advantages in speed, maneuverability, and trajectory over ballistic missiles and ramjet cruise missiles may allow hypersonics to erode defenses and provide asymmetric advantages to nations which employ them from the onset of an engagement.¹ After years of speculation and classified development, HGVs are no longer theoretical but in the field or on the cusp of deployment for several nations. Unsurprisingly, one of the most scrutinized weapons displayed at the People's Republic of China's (PRC) October 1, 2019 National Day parade was the Dong Feng-17 (DF-17) HGV system. Though ascertaining the exact technical capabilities of the DF-17 from public sources is not yet possible, it is without a doubt a next-generation weapon. Its deployment will certainly factor into future strategic, tactical, and political calculations made regarding the Asia-Pacific. This article seeks to examine how the DF-17 might be used in a

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¹ R. Jeffrey Smith, "Hypersonic Missiles Are Unstoppable. And They're Starting a New Global Arms Race.," *The New York Times*, June 19, 2019, sec. Magazine, https://www.nytimes.com/2019/06/19/magazine/hypersonic-missiles.html.

Pacific conflict and the larger role it plays in China's regional missile strategy and international position in a new era of great power competition.

Though hypersonic weapons have not yet integrated themselves as core component of any nation's missile strategy, with further technological advancements and increased hypersonic weapons production on the horizon, that seems likely to change. China, Russia, and the United States are competing to rapidly build and deploy HGVs. China's October 1st exhibition of the DF-17 followed significant Russian announcements the year prior: Vladimir Putin claimed to have begun serial production of Russia's nuclear-capable Avangard HGV in March 2018, advertising a purported lead in research and development which increased pressure on Chinese and American HGV programs.² Though the US Department of Defense (DOD) examined and began testing conventional HGVs as an avenue for its Prompt Global Strike mission as early as 2003, recent advances made by Russia and China seemingly indicate that the US defense community lags behind its competitors—in timeline if not in technology.³ This delay has led to increasing concern in the US military and policymaking circles and prompted a new push for hypersonic weapons quantified by USD 2.6 billion and allocated for hypersonic

² "Russia Begins Serial Production of New Cutting-Edge Glide Vehicle," *TASS*, March 1, 2018, accessed October 22, 2019, https://tass.com/defense/992297.; "Putin Announces Russia Possesses Hypersonic Weapons," *TASS*, March 1, 2018, accessed October 22, 2019, https://tass.com/defense/992214.

³ Amy F. Woolf, "Conventional Prompt Global Strike and Long-Range Ballistic Missiles: Background and Issues" (Congressional Research Service, August 14, 2019), pp. 2, 10.

prototyping in the DOD FY2020 budget.⁴ The US Army plans to field its first HGV battery in 2023.⁵

In China, the People's Liberation Army (PLA) has in recent years greatly expanded its military capacity by developing its ballistic missile and cruise missile capabilities. As a part of sweeping 2015 military reforms, the PLA formed the PLA Rocket Force (PLARF), a full service on-par with the army and navy. The mass of theater weapons the PLARF has fielded are primarily intended to threaten Taiwan and US Pacific assets ostensibly to deter the United States from entering into conflict over the island. The PLARF is the backbone of China's "active defense" strategy and island chain control.⁶ With the increasing ability of US ballistic missile defense (BMD) systems, Chinese strategists may perceive an aggressive hypersonic missile program as a strong avenue to renew and expand the PLARF threat. The impact of the DF-17 will depend on whether it can truly out-maneuver the point defense systems designed to counter existing PLARF theater ballistic missiles (TBMs). If the DF-17 is indeed capable of evading these interceptors, it stands to play a significant role in the Pacific as a new conventional first strike option which grants China leverage without straying from the no first use nuclear weapons policy. American military officers and defense officials

⁴ "United State Department of Defense Fiscal Year 2020 Budget Request," United States Department of Defense, 2019, pp. 1-9, https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2020/fy20 20_Budget_Request_Overview_Book.pdf.

⁵ Michael Peck, "You're Dead: The U.S. Army's Truck-Mounted Hypersonic Missile Is Coming," *The National Interest*, September 29, 2019, https://nationalinterest.org/blog/buzz/youre-dead-us-army%E2%80%99s-truck-mounted-hypersonic-missile-coming-74016.

⁶ China and State Council Information Office, *China's National Defense in the New Era*, 2019, p. 21.

have stated that US forces are not currently prepared to combat an HGV attack, making the looming threat of one more powerful.

Though this article primarily focuses on the known technical capabilities and combat applications of the DF-17, it is essential to highlight that deploying and publicly displaying the DF-17 is intended to serve as a Chinese Communist Party (CCP) propaganda tool and sign of PLA strength. Even if the DF-17 did not measure up to its purported capabilities, its existence serves to promote the CCP narrative about China's "rejuvenation" and its position as a world leader. It is conceivable the DF-17 may be a political investment almost as much as a strategic or tactical one. Though serious military conflict in the Pacific remains unlikely, the DF-17 may contribute to China's increasingly bold military operations and posturing in the Asia-Pacific given an increased degree of confidence in PLA threat and prestige.

Advantages of Hypersonic Glide Vehicles

Hypersonic glide vehicles possess a number of clear advantages over traditional ballistic missiles, including those with maneuverable reentry vehicle (MaRV) and multiple independently targetable reentry vehicle (MIRV) capabilities. The term "hypersonic weapons" gives credence to common misconception that these weapons are faster than ballistic missiles. This is not the case. Intercontinental ballistic missile (ICBM) reentry vehicles (RVs) enter the atmosphere at high hypersonic speeds between Mach 17.6 and Mach 23.5, values comparable with only the fastest HGVs like the HTV-2 built by The Defense Advanced Research Projects Agency (DARPA), which travels around Mach 20.7 Some HGVs,

⁷ "Ballistic and Cruise Missile Threat," Defense Intelligence Ballistic Missile Analysis Committee, 2017, p. 8,

https://www.nasic.af.mil/LinkClick.aspx?fileticket=F2VLcKSmCTE%3d&portalid=

including DF-17 and the US Army's Advanced Hypersonic Weapon (AHW) are significantly slower than ballistic RVs, at Mach 5-10 and Mach 8 respectively. ⁸ The real strengths of HGVs lie in trajectory and maneuverability.

HGVs are launched on ballistic missile boosters and separate after the rocket's burn is complete but, unlike ballistic re-entry vehicles, do not continue into space on a predictable trajectory. Instead, gliders remain within or quickly reenter the atmosphere. They use fins to steer and glide unpowered at altitudes between 40 and 100 km until reaching their intended target. An advanced HGV can theoretically travel as far as an ICBM simply by using aerodynamic forces to continuously generate lift. Because the glide vehicles travel within the atmosphere and necessarily possess control surfaces, they can also maneuver at any point in their flight after completing the initial ballistic stage, making them significantly more dynamic than conventional ballistic missiles. An advanced HGV could switch targets mid-flight or falsely indicate a target before changing course, a capability termed target obfuscation. The glider could also steer around or mislead interceptors, a major focus of hypersonic weapons discussions.

^{19;} Peter Erbland, "Falcon HTV-2," Defense Advanced Research Projects Agency (DARPA), accessed October 22, 2019, https://www.darpa.mil/program/falcon-htv-2.

⁸ Peck, "You're Dead: The U.S. Army's Truck-Mounted Hypersonic Missile Is Coming."

⁹ Richard H. Speier et al., *Hypersonic Missile Nonproliferation: Hindering the Spread of a New Class of Weapons* (Santa Monica, CA: RAND, 2017), p. 9.

¹⁰ Smith, "Hypersonic Missiles Are Unstoppable. And They're Starting a New Global Arms Race."

Since ballistic missiles are predictably over the Earth's surface, reaching apogees well above 1,000 km at longer ranges, even advanced MaRV and MIRV systems are potentially susceptible to exo-atmospheric midcourse interception. 11 Even shorter-ranged ballistic missiles (SRBMs) and medium-range ballistic missiles (MRBMs) (which strike targets up to 3000 km from their launch site) reach apogees several hundred kilometers above the 100 km Kármán line demarcating space. 12 Though ballistic missiles typically employ decoys and countermeasures to complicate midcourse interception, HGVs possess the immediate advantage of not being susceptible to exo-atmospheric ballistic missile defense systems at all.¹³ Without a midcourse interception option, only boost-phase and terminal interception are feasible. Yet boost phase interception is difficult without capable missiles and sensors located in close proximity of the missile launch site and a chain of command prepared for immediate action. 14 This is further complicated if the missiles are road-mobile and somewhat unpredictable, or if the missiles are launched deep inland. Terminal missile defense, on the other hand, cannot protect a large area from attack, only a small pre-determined priority area. Even then, many fear that the maneuverability of HGVs will allow them to evade modern terminal BMD systems.

¹¹ Rob Brown, "Ballistic Missile Defense Challenges," Missile Defense Agency, November 20, 2002.

¹² Brown, "Ballistic Missile Defense Challenges."

National Research Council (U.S.), ed., *Making Sense of Ballistic Missile Defense: An Assessment of Concepts and Systems for U.S. Boost-Phase Missile Defense in Comparison to Other Alternatives* (Washington, D.C: National Academies Press, 2012), p. 102.

National Research Council (U.S.), *Making Sense of Ballistic Missile Defense*, p.
 30.

The suppressed trajectory and unusual design of HGVs provide further advantages over ballistic missiles in tracking. Any nation which relies on ground-based line-of-sight sensors to track incoming missiles will not be able to detect or track the HGV until the final stages of its descent due to the curvature of the Earth. ¹⁵ In essence, because ballistic missiles travel so far over the surface of the planet, radar installations can directly "see" ballistic RVs much sooner than they can HGVs, which remain closer to the ground. 16 A RAND Corporation report determined that the radar detection time for a 3,000 km ballistic RV would be halved with an HGV from approximately twelve minutes to six. 17 Even nations with geostationary satellite tracking may not be able to accurately track HGVs which are, "10 to 20 times dimmer than what the U.S. normally tracks by satellites."18 Detecting and combatting HGVs requires significant new defense investments which could in turn trigger further HGV development in rival nations in a dangerous cycle. Experts have widely warned of the potentially destabilizing effects of HGV proliferation: arms-racing, potential nuclear escalation, implementation of launch-onwarning systems, and more.¹⁹

¹⁵ Speier et al., *Hypersonic Missile Nonproliferation* pp. 10-11.

¹⁶ Speier et al., *Hypersonic Missile Nonproliferation* pp. 10-11.

¹⁷ Speier et al., *Hypersonic Missile Nonproliferation* p. 11.

¹⁸ Kelley Sayler, "Hypersonic Weapons: Background and Issues for Congress," Congressional Research Service, September 17, 2019, p. 3, https://fas.org/sgp/crs/weapons/R45811.pdf.

¹⁹ "Hypersonic Weapons: A Challenge and Opportunity for Strategic Arms Control," New York: United Nations Office of Disarmament Affairs, 2019, pp. 18-19, https://s3.amazonaws.com/unoda-web/wp-content/uploads/2019/02/hypersonic-weapons-study.pdf.

Capabilities of the DF-17

The DF-17 is a weaponized version of the DF-ZF hypersonic glide vehicle, formerly known as the WU-14 in the United States. The Chinese government began developing the DF-ZF in 2009 and reportedly first tested the HGV in January 2014.²⁰ By 2016, the DF-ZF had been tested at least seven times, six of these times successfully.²¹ According to US intelligence officials, DF-ZF demonstrated a high degree of maneuverability in these tests. ²² Though there was significant speculation about the weaponization of the HGV, these fears were not substantiated until December 2017 when *The Diplomat* reported on two

https://web.archive.org/web/20151129233721/https:/www.janes.com/article/56 282/us-officials-confirm-sixth-chinese-hypersonic-manoeuvring-strike-vehicle-test.

²⁰ Henri Kenhmann, "DF-17: Ce que l'on sait de cette arme hypersonique chinoise," *East Pendulum* (blog), October 7, 2019,

http://www.eastpendulum.com/df-17-ce-que-lon-sait-de-cette-arme-hypersonique-chinoise; Richard D. Fisher Jr., "US Officials Confirm Sixth Chinese Hypersonic Manoeuvring Strike Vehicle Test," *IHS Jane's 360*, November 29, 2015,

Franz-Stefan Gady, "China Tests New Weapon Capable of Breaching US Missile Defense Systems," *The Diplomat*, April 28, 2016, accessed October 22, 2019, https://thediplomat.com/2016/04/china-tests-new-weapon-capable-of-breaching-u-s-missile-defense-systems/; James M. Acton, "China's Advanced Weapons," Carnegie Endowment for International Peace, February 23, 2017, accessed October 22, 2019, https://carnegieendowment.org/2017/02/23/china-s-advanced-weapons-pub-68095.

²² Bill Gertz, "China Conducts Fifth Test of Hypersonic Glide Vehicle," *Washington Free Beacon*, August 21, 2015, https://freebeacon.com/national-security/china-conducts-fifth-test-of-hypersonic-glide-vehicle/.

DF-17 tests the month prior, citing unnamed US intelligence officials.²³ The DF-17's introduction worried observers. The weapon was a significant leap in the HGV race: the November 2017 tests were the world's first tests of an HGV system intended for field operation."²⁴

When the weapon's existence was first reported, sources in the US government indicated that the DF-17 would reach initial operating capability (IOC) around 2020. ²⁵ This estimate did not vary among analysts until the first public appearance of the DF-17 at the October 1, 2019 Chinese National Day military parade. By including the sixteen DF-17 missiles in the event, the Chinese government intended to showcase that the weapon had beaten speculation and reached IOC within 2019. ²⁶ Parade announcers specifically described the DF-17 as a conventional missile, but independent analysis indicates the glider also supports nuclear warheads by design. An August 2019 news article quoted an unnamed employee of the glider's manufacturer, the state-owned China Aerospace Science and Industry Corporation (CASIC), who described the glider as nuclear and conventionally dual-capable. ²⁷ This account corroborated a late-2017 description of the HGV by a US intelligence

²³ Ankit Panda, "Introducing the DF-17: China's Newly Tested Ballistic Missile Armed With a Hypersonic Glide Vehicle," *The Diplomat*, December 28, 2017, accessed October 22, 2019, https://thediplomat.com/2017/12/introducing-the-df-17-chinas-newly-tested-ballistic-missile-armed-with-a-hypersonic-glide-vehicle/.

²⁴ Panda, "Introducing the DF-17: China's Newly Tested Ballistic Missile."

²⁵ Panda, "Introducing the DF-17: China's Newly Tested Ballistic Missile."

²⁶ Kenhmann, "DF-17."

²⁷ Kristin Huang, "China's Hypersonic DF-17 Missile Threatens Regional Stability, Analyst Warns," *South China Morning Post*, August 23, 2019, accessed October 22, 2019, https://www.scmp.com/news/china/military/article/3023972/chinas-hypersonic-df-17-missile-threatens-regional-stability.

source.²⁸ The PRC's portrayal of the glider as a conventional precision strike weapon reflects a strategic choice rather than a technical one; by choosing to pursue conventional gliders, the PLARF increased the likelihood the glider would be employed in combat while mitigating potential accusations of violating China's no first use nuclear weapons policy. A Chinese military source told reporters in November 2019 that all further DF-17s introduced to service would possess conventional warheads.²⁹



DF-17 in military parade for 70th anniversary of the People's Republic of China. (Source: Ministry of National Defense People's Republic of China)

Ankit Panda, "Hypersonic Hype: Just How Big of a Deal Is China's DF-17 Missile?" *The Diplomat*, October 7, 2019, accessed October 22, 2019, https://thediplomat.com/2019/10/hypersonic-hype-just-how-big-of-a-deal-is-chinas-df-17-missile/.

²⁹ Minnie Chan, "Will Hypersonic DF-17 Missile Transform Beijing's Taiwan Strategy?," *South China Morning Post*, November 16, 2019, https://www.scmp.com/news/china/military/article/3037972/will-hypersonic-df-17-missile-transform-beijings-taiwan.

According to US intelligence assessments, the booster of the DF-17 is heavily based on the two-stage, road-mobile, solid-fueled DF-16B SRBM.³⁰ The DF-16 entered service in 2011 or 2012 and carries three MIRV conventional, submunition, or nuclear warheads with a range of 800-1,000 km. ³¹ The DF-17 is longer ranged than its ballistic counterpart and can reportedly strike targets 1,800-2,500 km from its launch point, traveling at speeds between Mach 5 and Mach 10 altitudes around 60 km.³² The DF-ZF glider is wedge-shaped, taking after Defense Advanced Research Projects Agency's (DARPA) HTV-2 and Russia's Avangard rather than the US Army's conical AHW, a graphic of which was sometimes confused for the DF-ZF in early reporting.

By the numbers, the DF-17 is not as ambitious of an HGV as those tested by DARPA, the US Army, or the Russian government, something potentially overlooked if one conflates all hypersonic weapons despite speed differences greater than Mach 10 and thousands of kilometers in range discrepancy. Even at the upper end of the DF-17's speed estimate, Mach 10, it falls far short of DARPA's HTV-2's Mach 20 or Russia's Avangard's alleged (likely exaggerated) Mach 27 flight velocity. ³³ Similarly, though the range of the DF-17 (1,800-2,500 km) is significant, it is well shy of the 6,000+ km ranges of the Avangard and the US Army's AHW and certainly not on the order of 16,000 km, as some researchers have based broader assessments of HGVs.³⁴ Though some analysts have

³⁰ Panda, "Introducing the DF-17: China's Newly Tested Ballistic Missile."

³¹ "DF-16 (Dong Feng-16 / CSS-11)," CSIS Missile Threat, November 14, 2019, https://missilethreat.csis.org/missile/dong-feng-16-css-11/.

³² Panda, "Introducing the DF-17: China's Newly Tested Ballistic Missile."

³³ "Борисов: испытания комплекса 'Авангард' доказали его способность разгоняться до 27 Maxoв," *TASS*, December 27, 2018, https://tass.ru/armiya-i-opk/5958896.

³⁴ "Avangard," CSIS Missile Threat, September 29, 2019,

https://missilethreat.csis.org/missile/avangard/; Woolf, "Conventional Prompt

suggested that placing the DF-ZF on an ICBM would give it global range, this is implausible. The DF-ZF is almost certainly incapable of withstanding the heat stress and maintaining the required lift-to-drag ratios and speeds required for a long-distance glide.

While the United States and Russia worked for years on long-range HGVs, China chose to focus on the medium-range DF-ZF. This choice may indicate an effort to increase the program's speed, given fewer technical challenges, but it also likely reflects the PLARF priority on theater-use weapons not mirrored by American and Russian counterparts. Sources within the Chinese military have described the DF-17 as a replacement for the older and less accurate DF-11 and DF-15 SRBMs trained heavily on Taiwan. 35 This, coupled with the missile's conventional nature, suggest a different objective than Russia's Avangard program, which aims to defeat US national missile defenses to deliver a nuclear strike. China and Russia do share similar concerns about US BMD and future prompt global strike programs eliminating their strategic deterrent, however. Analysis of Chinese HGV literature shows little distinction between national and theater missile defense systems in technical reports.³⁶ The likely next goal in China's HGV program—creating a glider with ranges comparable to US and Russian systems—will introduce significant new challenges in modeling, aerodynamic control,

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Global Strike and Long-Range Ballistic Missiles: Background and Issues," p. 16; Speier et al., *Hypersonic Missile Nonproliferation*, p. 9.

³⁵ Minnie Chan, "Will Hypersonic DF-17 Missile Transform Beijing's Taiwan Strategy?"

Lora Saalman, "China's Calculus on Hypersonic Glide," Stockholm International Peace Research Institute, August 15, 2017, https://www.sipri.org/commentary/topical-backgrounder/2017/chinas-calculus-hypersonic-glide.

navigation, and testing.³⁷ The DF-17 will undoubtedly act as a stepping stone in its efforts to develop such a weapon.

The DF- 17 in a Conflict

Some reports describe the DF-17 as a weapon driven by technology development to catch up with the United States and Russia rather than for a specific military objective.³⁸ Though this is likely true (or was in earlier development), the DF-17 now stands to play an important role for the PLARF. Though the DF-17 lacks some of the attributes analysts have described as major benefits of HGVs (i.e. extreme range and high hypersonic speed), it nonetheless boasts a variety of advantages over the TBMs China has deployed to this point. Despite some speculations about anti-area access denial (A2/AD) anti-ship applications, the DF-17 is not currently able to target a moving aircraft carrier.³⁹ The consensus among specialists is that the DF-17 is designed primarily to evade the BMD systems deployed by the United States and its allies in the Pacific.⁴⁰ US-developed point defense systems include land-based Terminal High Altitude Area Defense (THAAD), Patriot Advanced Capability-3 (PAC-3), and Aegis Ashore interceptors as well as ship-based Aegis BMD (see table 1).

³⁷ Acton, "China's Advanced Weapons."

³⁸ "Hypersonic Weapons: A Challenge and Opportunity for Strategic Arms Control," p. 15.

³⁹ Minnie Chan, "Will Hypersonic DF-17 Missile Transform Beijing's Taiwan Strategy?"

⁴⁰ Karen Montague Erika Solem, "The Ultimate Guide to China's Hypersonic Weapons Program," *The National Interest*, May 3, 2016, https://nationalinterest.org/blog/the-buzz/the-ultimate-guide-chinas-hypersonic-weapons-program-16029.

System	Developer	Intercept Phase(s)	Location(s)	Operator(s)
THAAD	Lockheed Martin	Midcourse, Terminal	Guam, South Korea	United States
PAC-3	Raytheon	Terminal	South Korea, Japan, Taiwan	United States, South Korea, Japan, Taiwan
Aegis Ashore	Lockheed Martin	Ascent, Midcourse, Terminal	Japan (planned)	NA
Korean Air and Missile Defense	Multiple	Terminal	South Korea	South Korea
Sky Bow (天弓)	National Chung- Shan Institute of Science and Technology	Midcourse, Terminal	Taiwan	Taiwan
Aegis BMD	Lockheed Martin	Ascent, Midcourse, Terminal	Ship-based	United States, South Korea, Japan, Australia (planned)

Table 1. Ballistic Missile Defense Systems Employed by the United States and its Allies in the Pacific. (Source: Author's compilation from Arms Control Association 2019, Alex Calvo 2018, National Research Council (U.S.) 2012, p. 74.)

Some experts have suggested current terminal BMD systems might be adapted to defend against HGVs like the DF-17.⁴¹ Crucially, if this is true, the DF-17 will do little to alter the status-quo and have a minimal impact

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⁴¹ James M. Acton, "Hypersonic Weapons Explainer," Carnegie Endowment for International Peace, April 2, 2018, accessed November 27, 2019, https://carnegieendowment.org/2018/04/02/hypersonic-weapons-explainer-pub-75957.

on the US-China strategic balance or China's regional hold. But if the DF-17 is indeed capable of evading these BMD systems, as some US officials have suggested, then the PLARF may now be capable of crippling critical defense systems of its opponents at the onset of a conflict in the Asia-Pacific region. In such a conflict, the DF-17 would likely act as a firststrike weapon to destroy BMD batteries and radar installations, making way for ballistic missiles and slower cruise missiles to strike essential targets unimpeded. As the tip of the spear in Chinese missile strategy, HGVs may soon constitute a critical cog in the PLARF combat machine. A 2017 Center for a New American Security simulation found that the sheer number of PLARF SRBMs could overwhelm current US BMD at bases in Japan in a preemptive strike scenario but that a significant portion of the ballistic missiles would be intercepted: ~40-70% at Okinawa, ~65-80% at Yakota, ~40-60% at Yakosuka, and ~40-70% Misawa.42 If an initial HGV strike were to effectively eliminate BMD systems, it would significantly increase the efficiency and lethality of the missiles that followed, allowing for the near-complete destruction of command and control centers, ships at port, runways, hangers, and logistical facilities which could tip the scales of a conflict. Though it is already possible for China to achieve significant damage by exhausting and overwhelming interceptor missiles, the DF-17 would allow the PLARF to strike more targets and quicken the assault.

⁴² Thomas Shugart and Javier Gonzalez, "First Strike: China's Missile Threat to U.S. Bases in Asia" Center for a New American Security, 2017, p. 14, JSTOR, https://www.jstor.org/stable/resrep06168.



Launching of Sky Bow Missile. (Source: Youth Daily News)

This principle applies worryingly to Taiwan. As outlined in the US Department of Defense 2019 China Military Power Report: "The PLA continues to prepare for contingencies in the Taiwan Strait to deter, and if necessary, compel Taiwan to abandon moves toward independence. The PLA also is likely preparing for a contingency to unify Taiwan with the mainland by force, while simultaneously deterring, delaying, or denying any third-party intervention on Taiwan's behalf."⁴³

Though the PLA currently possesses the military capability to overwhelm Taiwan, the DF-17 serves to ensure a lethal and efficient conflict which would further advantage China from the start and cripple Taiwan's asymmetric advantages as a defender. Eliminating Taiwanese

[&]quot;Military and Security Developments Involving the People's Republic of China 2019," United States Department of Defense, 2019, p. 70, https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019_CHINA_MILITARY_POWER_REPORT.pdf.

indigenous and imported BMD (Sky Bow and PAC-3 systems) would allow ballistic missiles to efficiently eliminate Taiwan's defenses and control and logistics centers from afar before risking the significant casualties an invasion might incur. This is potentially a sharp blow to Taiwan, whose defense posture rests in large part on assuring that any invasion, even if eventually successful, would be excruciatingly painful and protracted and therefore not worth the risk.⁴⁴ By quickening the speed of an invasion, the DF-17 would also further a key element of China's invasion plan: seizing the island so quickly and decisively that the United States would not have time to deliberate and plan an intervention.

Great Power Competition Implications

Given the continued improbability of US-China military conflict, the DF-17 will likely play its most important role as a deterrent and tool to grant China increased leverage rather than a tactical weapon. The PLA aims to build a force sufficiently threatening to dissuade the United States from intervening in a conflict with Taiwan or contesting its claims in the South China sea. Because the DF-17 exposes the United States to sudden and increasingly lethal attack, its introduction strengthens the Chinese hold over the Asia-Pacific. So long as global policymakers believe Chinese HGVs are a serious threat to adversarial forces in the Pacific, the DF-17 will remain a critical element in assessing the strength of the PLA and the risks of involvement in regional conflict. At a 2018 testimony before

⁴⁴ 2017 National Defense Report, The Republic of China Ministry of National Defense, December 2017, p. 67, http://www.us-

taiwan.org/reports/2017_december_taiwan_national_defense_report.pdf.

⁴⁵ "Military and Security Developments Involving the People's Republic of China 2019," p. 70.

the Senate Armed Services Committee, US Under Secretary of Defense for Research and Engineering Michael Griffin stated:

China has fielded or can field [...] hypersonic delivery systems for conventional prompt strike that can reach out thousands of kilometers from the Chinese shore and hold our carrier battle groups or our forward-deployed forces on land that we have bases [...] at-risk. We, today, do not have systems that can hold them at-risk in a corresponding manner, and we do not have defenses against those systems.⁴⁶

US Air Force General John Hyten, now Vice Chairman of the Joint Chiefs of Staff and then-head of the United States Strategic Command, responded similarly when asked about HGVs before the same committee, "We don't have any defense that could deny the employment of such a weapon against us."⁴⁷ These testimonies indicate that concerns about hypersonic weapons and the DF-17 are at the forefront of US policymakers and military officials' minds. The DF-17's presence will have had a real impact on how the PLA threat is perceived.

China has capitalized on "hypersonic hype," the significant rise in speculations and hyperbolic depictions of hypersonic weapons. China's public display of the DF-17 at its National Day parade all but proclaimed victory in the HGV race. Media reports picked up on this, announcing that

⁴⁶ Michael Griffin, Hearing to Receive Testimony on Accelerating New Technologies to Meet Emerging Threats, April 18, 2018, 13, https://www.armed-services.senate.gov/imo/media/doc/18-40_04-18-18.pdf.

⁴⁷ Amanda Macias, "China and Russia Are 'Aggressively Pursuing' Hypersonic Weapons, and the US Can't Defend against Them, Top Nuclear Commander Says," *CNBC*, March 20, 2018, https://www.cnbc.com/2018/03/20/china-and-russia-aggressively-are-pursuing-hypersonic-weapons-general.html.

China had beaten the United States and Russia in their pursuits of hypersonic weapons but often failing to describe the strategic or technical differences in the systems each nation is developing. Given the perception of hypersonic weapons as an invincible next-generation asymmetric weapon, this development seemed like a testimony that the PLA is catching up with, and even eclipsing, the US military. This perception helps the PLA expand its reputation as a major power in Asia and beyond.

Using the DF-17 to evidence the PLA's supremacy also serves to strengthen the PLA's image and appeal at home while advancing the narrative that China under the CCP has returned as a great power to fear and respect. Though the DF-17 or any one weapon cannot shift perceptions or transform the PLA overnight, they contribute to the larger CCP efforts to incite nationalism and improve the military's standing. If these schemes continue to succeed, the PLA may become increasingly bold in the face of the United States and American allies, for example increasing military presence and armament in the Spratly Islands and sending naval vessels and jets near or through Taiwan's Air Defense and Identification Zone (ADIZ).⁴⁸

Conclusion

The DF-17 does not grant the PLARF sudden new capabilities to challenge US or its allies' military targets. Assuming the HGV is capable of evading BMD, however, the missile does increase the efficiency and threat of the PLARF and its existing missiles. The DF-17 may not greatly alter US Pacific strategy for the short term, but it remains a powerful weapon, both in combat situations and a larger context. The looming

⁴⁸ "Military and Security Developments Involving the People's Republic of China 2019," p. 15.

threat of an asymmetric anti-BMD strike, enhanced by efforts to capitalize on "hypersonic hype," could aid the reputation and perception of the PLA and ultimately strengthen its ability to deter regional intervention in a regional conflict—the most important purpose of the weapon's development. The scope of the DF-17 and its inherent challenge to US BMD in the Pacific indicate a gain for China's active defense strategy. Until the United States develops adequate hypersonic weapons defense systems, a strategic response for the weapon, or engages in talks with the Chinese government, the DF-17 will provide the PLARF a regional threat boost as a capable non-nuclear deterrent. The DF-17 will also certainly serve as a stepping stone for further HGV development, indicating the worrying potential for future arms racing and escalation. Though the introduction of this one weapon alone will not change the US Indo-Pacific stance overnight, China undoubtably hopes the DF-17 is a significant step toward control over the Pacific.

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Submission

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