Great Talent Management

With great power (competition) comes great responsibility by Maj Julia Weber & Maj Anne Boaden

n the introduction to Talent Management 2030, Gen David Berger, the CMC, explicitly discusses the Marine Corps' current Industrial Age model of personnel management and what has changed in the United States since the model was established. What he alludes to, but does not discuss directly in Talent Management 2030, are the dramatic shifts occurring overseas that are driving changes to our National Defense Strategy. These changes in the balance of international power are the drivers behind the Marine Corps' planned transformation from a landbased, relatively low-tech, counterterrorism force to a high-tech, armed maritime reconnaissance force—one that is specifically designed to further the forward projection of U.S. naval power and enable sea control.¹

In order to remain relevant in an era of great power competition and deliver the capabilities the CMC outlines in A Concept for Stand-in Forces, the Marine Corps must become more technologically capable—and must do so quickly.² The existing paradigms of recruiting, training, and promoting Marines will not produce the technologically capable force needed on the timeline available. The changes that the CMC outlines in Talent Management 2030 are the minimum needed to allow the Marine Corps to remain a credible threat to our competitors. Only by adopting flexible practices that are designed to attract and optimally apply available talent against prioritized problem sets will the Marine Corps be able to become the stand-in force that the United States both wants and needs.³

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The New Geopolitical Landscape

Over the past twenty years, the United States has been steadily burning through both national treasure and the Nation's will to engage in conflicts overseas via the wars in Iraq and Afghanistan. Meanwhile, China, Russia, Iran, North Korea, and a number of smaller nations have made astonishing technological advances in cyber, space, and other realms, and they show no signs of slowing down. At the turn of the 21st century, U.S. politicians and strategists hoped that these growing nations would become responsible leaders, contributing to freer and more open societies, but that optimism has given way to recognize that they remain determined rivals.⁵ Their technological developments span both military and commercial fields and a simple look at some leading indicators starts to paint a worrying picture for the United States' ability to preserve the "long peace,"

"In the past two decades, China has risen further and faster on more dimensions than any nation in history. As it has done so, it has become a serious rival of what had been the world's sole superpower. To paraphrase former Czech president Vaclav Havel, all this has happened so quickly that we have not yet had time to be astonished."⁴

-Graham Allison

which has existed between nuclearcapable nations since World War II. The following tables present a snapshot of the relative status of a number of national measures from publicly available data for China, Russia, and the United States from 2000 and 2020.

While the total population differences between China, Russia, and

the United States have not changed dramatically on a proportional basis between 2000 and 2020, the rise of China and Russia in these other measures is remarkable. This includes the gross domestic product, number of science, technology, engineering, and mathematics (STEM) graduates, number of internet users, and number of semiconductors produced. In just twenty years, Russia and China have more than tripled their gross domestic product in relation to the United States. Together they have more than four times as many STEM graduates and internet users as the United States, and China alone is now exporting more than six times as many semiconduc-

Table 1. Leading Indicators from 2000 ⁶								
	China	Russia	Combined	Combined % of US	United States			
Population	1,262,645,000	146,596,869	1,409,241,869	499.4%	282,162,411			
GDP (in 2020 USD)	\$481,967M	\$259,710M	\$741,677M	7.23%	\$10,252,345M			
Total Exports (in 2020 USD)	\$253,092M	\$114,429M	\$367,521M	33.5%	\$1,096,111M			
Semiconductor Exports (in 2019 USD) ⁷	\$1,823M	\$46M	\$1,869M	32.2%	\$5,797M			
Active Duty Military End Strength	3,910,000	1,427,100	5,337,100	385.8%	1,383,214 ⁸			
Naval Fleet Size ⁹	693*	446	1,139	348.3%	327			
Tertiary STEM Graduates (per year) ^{10,11,12}	281,270	290,000**	571,270	234.5%	243,520			
Mobile Cellular Subscriptions	85,260,000	3,263,200	88,523,200	80.9%	109,478,031			
Number of Internet Users	22,222,552	2,887,958	25,110,510	20.6%	121,611,999			
% of Population Using the Internet	1.76%	1.97%	-	-	43.1%			

Table 2. Leading Indicators from 2020 ¹³								
	China	Russia	Combined	Combined % of US	United States			
Population	1,410,929,362	144,104,080	1,555,033,442	472.0%	329,484,123			
GDP (in 2020 USD)	\$8,027,719M	\$1,483,498M	\$9,511,216M	45.5%	\$20,893,746M			
Total Exports (in 2020 USD)	\$2,723,250M	\$378,635M	\$3,101,885M	146.1%	\$2,123,410M			
Semiconductor Exports (in 2019 USD) ¹⁴	\$34,785M	\$70.0M	\$34,855M	664.2%	\$5,248M			
Active Duty Military End Strength	2,185,000 ¹⁵	1,014,000 ¹⁶	3,199,000	238.0%	1,344,315 ¹⁷			
Naval Fleet Size ^{18***}	579	271	842	326.9%	260			
Tertiary STEM Graduates**** (per year) ¹⁹	1,447,330	264,600 ²⁰	1,592,330	421.9%	377,410			
Mobile Cellular Subscriptions	1,696,356,000	238,733,217	1,935,089,217	437.4%	442,457,000			
5G Cellular Sites	200,000	0	200,000	434.8%	46,000			
Number of Internet Users	996,116,129	122,488,468	1,118,604,597	379.8%	294,558,805			
% of Population Using the Internet	70.6%	85.0%	-	-	89.4%			

*Does not include the 29 Supply Ships or the 230 reserve Landing Craft Mechanized/Landing Craft Utility (LCM/LCU) Vehicles listed in Jane's.

**Estimated based on the percentage of the population in Russia aged 25-54 in 2016 with tertiary education [ref. 11], and the percentage of tertiary enrollees in STEM fields in Russia (~20 percent in the 2000s).

***Only submarines and surface fleet "in service" ship counts are presented. Auxiliaries are not included. Some data are from 2020, and some are from 2021. In addition to the above, Russia has an additional 880 tankers, research, supply, firefighting, hospital, repair, tug, transport, salvage, and patrol ships listed as auxiliary ships in Jane's database. Likewise, the United States has an additional 501 ships listed as auxiliaries in Jane's database.

****Data for the U.S. and China are from 2014. Data for Russia are from 2019. Russia's data were estimated based on the percentage of the population in Russia aged 25-34 in 2019 with tertiary education, and the percentage of tertiary education enrollees who are in STEM fields (~20 percent in the 2000s).

tors as the United States—a product on which nearly every piece of U.S. military equipment, other than a standard rifle, now depends. China's growing economy (in part funded by American consumerism) and increasingly educated population have enabled it to develop military equipment specifically designed to counter U.S. capabilities. cer detection algorithms to millions of marketing and user data points used to drive business and investment decisions, to computer-aided testing and design of new semiconductors, solar panels, cars, and military equipment. Given that China has four times the U.S. population, four times as many STEM graduates, a significant indus-

If we take the time to consider the second-and thirdorder effects of the United States' decline in these leading indicators, the future looks especially grim.

Given the relative population sizes and near parity in education levels, if the United States plans to innovate its way back into global dominance, the U.S. population, U.S. businesses, and the U.S. military in particular will have to be more than four times as innovative as the Chinese and Russians. This is unlikely given both the declining quality of primary and secondary education in the United States and the shrinking portion of the U.S. population that is eligible to serve in the military. The measure of the portion of the U.S. population eligible to serve in the military (less than 30 percent of 17–24 year-olds) is an indicator of an overall decline in the health and education levels of the U.S. population.²¹ Increases in the rate of criminal convictions, the number of single-parent households, and the number of attention deficit hyperactivity disorder diagnoses among Americans signal a decrease in the productivity level of the general population and are factors that may preclude military service.

If we take the time to consider the second-and third-order effects of the United States' decline in these leading indicators, the future looks especially grim. Today, artificial intelligence and its sub-field of machine learning are enabling dramatic leaps forward in business, across scientific disciplines, and in military capabilities. These advances are dependent on access to vast quantities of data: from hundreds of thousands of x-ray images on which to train cantrial base, and that it is nearly as "connected"²² as the U.S. population, one can infer that China is generating data at a rate of four or more times that of the United States. While data may or may not be the new oil, it is unarguably a valuable resource that Russia and China are exploiting, especially given their lax privacy regulations as compared to the United States.²³ According to the U.S. National Science Foundation, China now generates more research publications annually than the United States does.²⁴

Looking at some of the specific actions being taken by these states, it is clear that they have aspirations and intentions beyond just defending their borders. Russia, despite a relatively weak economy, still considers itself a great power and seeks recognition as such. As evidenced by its 2022 invasion of Ukraine, it is willing and able to take military action to reinforce and expand its influence regionally and globally.²⁵ Russia's rapid annexation of Crimea in 2014 demonstrated its ability to effectively integrate electronic warfare, air defense, long-range precision fires, information operations, and cyber-attacks. ²⁶ The follow-on Russian intervention in Syria provided the Russians with the opportunity to further refine these skills in the vicinity of U.S. forces where they disabled U.S. EC-130 electronic attack aircraft and blocked U.S. drones from receiving GPS signals.²⁷ Since 2016, Russia has continued to develop electronic warfare and cyber

capabilities at a rate that exceeds that of the United States.²⁸ Now, every Russian armor or infantry brigade has an electronic warfare company attached to it.²⁹ Similarly, Russia has deployed antisatellite weapons and done so without regard to their long-term effects on both Russian and international operations in space.³⁰ While the result of Russia's current invasion of Ukraine remains to be seen, these adaptations have no doubt facilitated its limited success initially and are force structure changes the U.S. military has yet to similarly implement.³¹ When specifically considering the Marine Corps in comparison, most Marines do not have the security clearance needed to even get briefed on the full nature of the threats that foreign electronic warfare capabilities present to them and their equipment, much less the education needed to understand how to recognize and counter them.

China, like Russia, seeks great power status on a global scale. However, unlike Russia, for many years China downplayed its ambition to avoid drawing unwanted attention to itself while it built economic and military capacity in accordance with a long-term strategic plan. By 2049, the centennial of China's Communist revolution, China plans to be the world's only superpower: "unrivaled economically, militarily, and culturally."³² It plans to achieve this through a series of repeated five-year plans and other intermediate milestones, such as becoming the world leader for high-tech manufacturing by 2025 and becoming the country that sets new global technological standards by 2035.³³ In keeping with the wisdom of Sun Tzu, it is likely that China seeks to become the dominant superpower without actually fighting. Rather, through continued economic expansion and investment in military capabilities that nullify U.S. advantages, China plans to present such a capable force that the United States and others will choose to defer to China, at least in the Asia-Pacific region, vice take up arms. The collapse of the Soviet Union and the subsequent rise of a democratic Eastern Europe was particularly motivating events for the Chinese Communist Party. Anti-American leaders in

Beijing used these events to frame the Tiananmen Square protests as a U.S. effort to "sow discord in the enemy camp" and justify investment in military capabilities specifically intended to counter U.S. strengths.³⁴

In the decades since the fall of the Soviet Union, China has invested heavily in the development of hypersonic weapons—missiles that are fast, low-flying, highly maneuverable, and can evade traditional U.S. missile defense systems. China is reportedly several years ahead of the U.S. in the development of these weapons, and GEN Mark Milley, Chairman of the Joint Chiefs of Staff, referred to a 2021 test by China of an orbiting hypersonic weapon as another "Sputnik moment" for the United States.³⁵ Orbiting hypersonic weapons can encircle the globe before striking their target and are thus highly unpredictable and difficult to defend against. China is also expanding its navy—which is arguably already technically on par with the U.S. Navy, installing hundreds of nuclear missile silos on the Chinese mainland and building electronic warfare stations on islands it has claimed or built in the South China Sea.³⁶ These electronic warfare stations are designed specifically to take out U.S. communication and navigation systems, potentially rendering military units within range deaf, dumb, and blind—making them sitting ducks ripe for missile attacks.³⁷

In addition to developing counters for U.S. command and control (C2) capabilities, China has also made significant headway in protecting its own C2 infrastructure. In 2016, China launched and successfully employed the world's first quantum communications satellite, essentially setting what will become the standards for quantum cryptographic key distribution.³⁸ Quantum-based encryption is currently considered unbreakable given the known limitations of particle physics. In addition to enabling unbreakable encryption, advances in quantum computing are also expected to render classical encryption methods obsolete as classical encryption will be decipherable with quantum computers.³⁹ Currently, all of the U.S. government and U.S. military's secure voice and data

communications are reliant on classical encryption. This, too, should have been regarded as a "Sputnik moment" by the United States, but it went largely unnoticed by the American general population, which has been, and remains, distracted by domestic politics.

In parallel with these technical advances, China's navy is expanding its routine operating areas, extending the influence of the Chinese Navy across the Indian Ocean to key ports in the Middle East and Africa, supplanting U.S. influence in these areas.⁴⁰ Closer to home, China is employing a maritime militia and deep-water fishing fleet to harass and intimidate its neighbors. This is a "force of vessels ostensibly engaged in commercial fishing but which in fact operate[s] alongside Chinese law enforcement and military to achieve political objectives in disputed waters."41 The maritime militia routinely "stakes out" islands in the East and South China Seas, giving credence to China's claims to the disputed territories. The militia also fishes en masse in other countries' exclusive economic zones, having depleted its own, and trains with China's navy to conduct mine-laying and reconnaissance activities.⁴² Militia ships are outwardly indistinguishable from the regular fishing fleet except in action,

in the Pacific nor widely trained to use these tools. This would include highspeed transport vessels, advanced sensors, and either the computing power needed to locally process and interpret multiple sensor feeds or the ability to securely and undetectably transmit significant quantities of collected data back to C2 nodes for remote processing. These shortfalls are borne out by the DOD's own analysis: "Over the past decade, in U.S. war games against China, the United States has a nearly perfect record: we have lost almost every single time. The American people do not know this. Most members of Congress do not know this—even though they should. But in the Department of Defense this is a well-known fact."43

This is evident not just in wargames but also now in actual force-on-force training exercises the Marine Corps is carrying out against adversaries equipped similarly to China.⁴⁴ Marines from squad leaders up to regimental and division commanders are unable to grasp the complexities of multi-domain operations. Not only do they not understand the implications of adversary technology but they do not even understand the full suite of organic Marine Corps' capabilities or how to effectively employ them. The results on the train-

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allowing them to engage in hostile activities and yet maintain deniability. Even without military equipment on board, the militia ships have the propensity to drastically complicate military maneuvers in the region by serving as reconnaissance and blockade elements.

The U.S. military, and in particular the Marine Corps, is currently outfitted and trained for small-arms combat with low-tech militia forces in a desert environment. The Marine Corps is neither outfitted with sufficient numbers of the types of tools it needs to help the Navy detect and counter Chinese aggression ing field are massive casualties, including numerous incidents of fratricide, and defeat. For Marines, the traditional path to leadership positions that flows through a set series of "professional" military education programs and repeat assignments in operational units is notably devoid of advanced technological training. The consequences of this are evident in these exercises, if not yet on an actual battlefield.

In light of these advances and actions by our competitors, the CMC, with the support of the Secretary of the Navy and the Chief of Naval Operations, is gambling that the Marine Corps, *with the financial support of Congress*, can capitalize on its small size and enterprising nature to quickly re-invent itself in order to address the United States' critical need for a high-tech, low-signature, forward-based naval reconnaissance force.⁴⁵ Indeed, "for us to continue to spend hundreds of billions of dollars in the same ways, on the same things, would be the height of folly. It would be exactly what our opponents want us to do."⁴⁶

The Marine Corps' Plan for Standin Forces

In December 2021, just one month after publishing Talent Management 2030, the CMC published A Concept for Stand-in Forces. This concept outlines how the Marine Corps will contribute to national defense in an era of great power competition as a part of a joint and/or allied force, rather than as a stand-alone MAGTF.⁴⁷ The Marine Corps will serve as "the eyes and ears of the fleet and joint force ... helping to complete naval and joint kill webs ... extend[ing] the reach of the fleet and joint force from inside contested areas." By "gaining and maintaining contact (establishing target custody and identifying adversaries' sensors) below the threshold of violence," stand-in forces will be able to assist in "identifying malign behavior" and, if armed conflict does erupt, enable the joint force to both "attack effectively first and prevent the enemy from doing so."

In order to become the Joint Force's forward eyes and ears in the Pacific, the Marine Corps must invest in technology that increases its mobility in coastal regions, enables it to passively detect and track adversarial actors and targets, rapidly and automatically transmit data, and communicate with not just the Navy and Coast Guard but also the Army, Air Force, Space Force, and our allies and partners. Marine units, as primarily armed reconnaissance forces, will need sufficient firepower to protect themselves and deter aggression against them but not so much that adversaries can easily detect them or that it hinders their ability to pick up and move within minutes. Mobility will be required to

both maintain custody of targets and avoid being targeted.

Since World War I, the mission of a Marine infantry unit has been to "locate, close with, and destroy the enemy."48 This paradigm was well supported by the oft-cited concept of "every Marine a rifleman." That paradigm is no longer sufficient in an era where our enemies are heavily invested in low-cost, long-range precision strike capabilities, and front lines no longer exist. A Marine and his rifle are no longer the "deadliest weapon in the world."49 A platoon of Marines, as currently equipped, is helpless and useless against an enemy who has the ability to use real-time satellite data to launch a precision missile strike from hundreds of miles away. The platoon of Marines would be identified and subjected to missile attacks before they even had the chance to locate, much less close with or destroy anything.

Currently, these skills mainly reside in our most senior non-commissioned officers, staff non-commissioned officers, and mid-grade officers. Given that these ranks form less than 30 percent of the Marine Corps, the upskilling and shift to a more mature, older force that the CMC calls for in *Talent Management 2030* is essential.⁵¹

Talent Management Requirements for Stand-in Forces

For the Marine Corps to be successful as a stand-in force, it must attract and retain more talented individuals with greater technical prowess, provide them with more advanced training and education, and ensure their skills and abilities are maximally employed. This is not an easy task. The U.S. Armed Forces are competing with industry and the tech sector for a shrinking slice of the population that is qualified to serve. In 2009, 75 percent of the U.S.

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To be effective, not only must every Marine still be capable of operating a rifle for local force protection, but the small, distributed teams of Marines sent forward as Stand-In Forces must also be well-versed in operating and updating software-defined radios, controlling and repairing autonomous vehicles, and establishing and maintaining local 5G (or other) secure computer networks. These teams of Marines will operate radars and other sensors; connect to and direct spacebased collection, communication, and targeting assets; and manage power and fuel requirements given limited options for re-supply. To provide the Joint Force with an information advantage, the small teams of Marines deployed as stand-in forces will have to be subject-matter experts in all the high-tech tools required to contribute to information collection and dissemination.50

population aged 17–24 was *ineligible* to serve in the Armed Forces based on poor physical fitness, inadequate education, or prior criminal conviction.⁵² Since 2009, national averages in both physical fitness and education have continued to degrade, further reducing the percentage of the U.S. population eligible to serve.⁵³

As an armed maritime reconnaissance force, the Marine Corps will predominantly need individuals who can operate high-tech equipment, understand and repair computer systems and electronics, work effectively in teams, and adapt to rapidly changing scenarios in high-stress environments. Marine Corps platforms and equipment have and will continue to become more advanced. So too must their operators. No longer are motor transport Marines working on Humvee engines which are similar to tractors or pickup trucks. Now, Marines are working on Joint Light Tactical Vehicles, which have as many electronic modules and hydraulic systems as military aircraft. Similarly, tactical radios no longer consist of a few transistors and an antenna. They involve, in a single package, multiple radios and antennae with each radio operating on different frequency bands with software-defined encryption states, and algorithm-controlled frequency *and* radio hopping. Even among combat arms career fields, the new concept calls for Marines to be trained on most, if not all, weapons available to the unit, to include small UAVs and loitering munitions. recruits and keep them on board for longer, it is going to have to offer different incentives. Free college tuition and comprehensive healthcare, while certainly valuable, are no longer unique selling points. Amazon, Walmart, UPS, Home Depot, Starbucks, and even Waste Management number among the many corporations offering frontline employees college tuition and other incentives.⁵⁷ U.S. technology companies in particular, which are competing with the military for technical talent, are known for their comprehensive benefits such as guaranteed childcare,

... the Marine Corps must make it easy for individuals who already have desirable technical skills to join without restarting their careers or taking a significant pay cut.

The advanced level of skill needed to operate and maintain this equipment in remote environments with minimal re-supply options is not *and cannot be* fully developed by our current entrylevel training programs.⁵⁴ To address the Marine Corps' shortfall of technical talent, training pipelines and the length of service contracts must be extended to address additional training requirements. Alternatively, recruits must enter the Marine Corps with a higher level of skill and choose to stay for multiple tours.

Unfortunately, patriotism alone is no longer sufficient to attract and retain the number of talented individuals needed in the Marine Corps. Recent polls show declining confidence in the military by the U.S. population, with numbers down from 70 percent of the population having "great trust and confidence" in the military in 2018 to just 45 percent in 2021.55 Additionally, when surveyed in 2015, over 80 percent of 18–29-year-old respondents indicated they would either "probably not want to" or "definitely not want to" serve in the military.⁵⁶ The Marine Corps has barely managed to hit its recruiting targets of late. As it looks to bring in more technically capable commuter reimbursement, family and parental leave, volunteer time off, gym memberships, paid cell phones, and more.⁵⁸ What they offer is on par with or better than the suite of benefits offered by the military.

To counter this, the Marine Corps must make it easy for individuals who already have desirable technical skills to join without restarting their careers or taking a significant pay cut. Currently, second lieutenants do not need to have served as sergeants before they can effectively serve as second lieutenants. After completing boot camp or Officer Candidates School, why would someone with advanced skills need to serve as a private before being able to serve as a staff sergeant? Or a lieutenant before serving as a major? The Marine Corps is not the only organization that develops leadership skills and the presumption that someone can only be an effective leader if they have diligently made their way through existing Marine Corps pipelines is preventing the Marine Corps from making the best use of the talent available. After earning the title Marine, the Corps must place Marines where their skills can be of most use, not force them through

rigid career and promotion pipelines designed to cater to the lowest skill level that the Corps will initially accept. To attract those with the needed technological abilities, the Marine Corps must provide options for qualified applicants to laterally enter at ranks commensurate with their skills and must move away from the requirement for all Marines to strictly follow traditional career paths in order to qualify for promotion.

To improve retention, the Marine Corps must make the reenlistment process automatic, and commanders must actively encourage Marines who are finishing their first and second terms of enlistment to stick around for the next one. When faced with repeated moves, being forced to live in rundown barracks with curfews, arduous administrative requirements, and, most importantly, little to no say in their career paths, schools, or assignment locations, it is not hard to understand why so many Marines choose to leave the Service, even if military take-home pay is on par with that for equivalent civilian jobs. The grass is greener on the other side of the fence.

The process changes that the CMC outlines in Talent Management 2030, such as matching recruits to MOSs that align with their talents and interests and providing Marines more say over what assignments they receive, are sorely needed to address these issues. While these concepts may be new to the Marine Corps, they are not new ideas. In 1869 John Stuart Mill posited: "[It] is not that all processes are equally good, and all persons are equally qualified for every task or trade; but rather freedom of individual choice is the only thing that leads to the adoption of the best processes, and puts each operation into the hands of those who are best qualified for it."59

Unless the strategic changes the CMC calls for in *Talent Management 2030* are implemented expeditiously and completely within the next two to three years, the Marine Corps will be unable to compete, and not just for talent. As Christian Brose argues in *The Kill Chain*, "The problem is not lack of money [or] lack of technology ... No, the real problem is a lack of imagina-

tion."⁶⁰ U.S. competitors have developed asymmetric, high-tech capabilities that nullify the conventional ways of waging war. The Marine Corps must get creative in whom it recruits, how it employs Marines, and what tools it provides them with in order to present a credible threat to competitors in this era of great power competition. The United States may still want a Marine Corps, but without adopting improved talent management practices, the one she will have will not be worth much on the international stage.

Notes

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3. Reference to the quote by LtGen Victor H. Krulak, "The United States does not need a Marine Corps. However, for good reasons which completely transcend cold logic, the United States wants a Marine Corps," from his 1957 letter to Gen Randolph Pate as provided in the preface to Krulak's book, *First to Fight*.

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