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THE PEOPLE OF THE PLA 2.0

Roy D. Kamphausen
Editor

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**STRATEGIC STUDIES INSTITUTE
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US ARMY WAR COLLEGE PRESS**

THE PEOPLE OF THE PLA 2.0

**Roy D. Kamphausen
Editor
July 2021**

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FOREWORD

It is my distinct pleasure to introduce the 2018 edition of the series on the Chinese People's Liberation Army (PLA) by the US Army War College Strategic Studies Institute, in conjunction with the National Bureau of Asian Research, and US Indo-Pacific Command. This volume, *The People of the PLA 2.0*, is a 10-year update to some of the key themes addressed in the 2008 edition, *The "People" in the PLA: Recruitment, Training, and Education in China's Military*.

The greater community of "China watchers" understandably tends to focus on factors such as the PLA's military modernization, operations, and force posture. Although these are critically important aspects of the PLA's readiness and worthy of examination, they are insufficient for understanding the evolving capabilities of the PLA as a near peer competitor to the United States. As this volume reflects, careful study of how the PLA recruits and educates its people, treats its veterans, and institutes personnel reforms gives us insight into how the PLA thinks about problems and devises solutions. Such careful study illuminates how the PLA behaves in response to the internal political, cultural, and educational dynamics within China and the external demands of readying and preparing its personnel for the conduct of joint modern warfare.

In addition, this in-depth analysis brings to light some of the bounds within which the PLA will think and act during crisis or conflict. Such insight on the PLA will not come from counting its hypersonic missiles, diagramming its organizational structures,

or even watching its exercises. Appreciating the human aspects of the PLA will inform effective engagement with the PLA by US military leaders and can contribute to avoiding conflict with the PRC in the future.

Carol V. Evans

CAROL V. EVANS

Director

Strategic Studies Institute and
US Army War College Press

INTRODUCTION

The 2018 Chinese People's Liberation Army (PLA) conference at Carlisle took place after a three-year period of rapid and intense change for the PLA. In November 2015 President Xi Jinping announced another round of military reforms that promised to inculcate the PLA with updated command and control structures, reorient its focus externally, and make progress toward becoming a more effective warfighting organization and ultimately a "world-class military" by mid-century. Chief among these reforms were adjusting the membership of the Central Military Commission (CMC), creating a service headquarters for the PLA Army, breaking up the PLA General Departments and making their constituent elements directly subordinate to either the CMC or the newly created PLA Army headquarters and Strategic Support Force (SSF), renaming and consolidating the seven ground-centric military regions into five joint theater commands, elevating the Second Artillery Corps to service level and renaming it the Rocket Force, chartering the SSF to handle cyber and space operations, creating the Joint Logistic Support Force to build a modern logistics structure, eliminating the division as a warfighting structure and replacing it with a brigade-level structure, and cutting another 300,000 personnel from the PLA. At the same time, Communist Party of China (CPC) control over the PLA was bolstered by targeting corruption within the leadership of the officer corps to ensure the PLA's fidelity to the party.

These developments took place against the backdrop of a China that is increasingly assertive, and even aggressive, vis-à-vis its neighbors while also

presenting an alternative model for global leadership. China has pressed forward with the Belt and Road Initiative, signing long-term leasing deals for ports in places such as Sri Lanka, Greece, and Australia. China also has continued to apply pressure in its regional territorial disputes with Japan in the East China Sea and with numerous countries in the South China Sea while at the same time conducting military operations intended to achieve coercive effects on the people and leadership of Taiwan. China also squeezed South Korea economically for its decision to permit the deployment of the US Terminal High Altitude Area Defense system. In addition, the PLA officially opened its first overseas military base in Djibouti while accelerating and expanding its joint exercise program at multiple levels.

At the same time, but less appreciated by outside observers, was the mandate to revamp the management and education of PLA personnel. As the volume's authors will make clear, this set of initiatives is integral to the overall program of reform. China understands that for the restructured forces of the PLA to win a future war, it needs to elevate the quality of its people. As such, the PLA seeks a corps of military professionals who are better educated, younger, and more technologically savvy; who can operate jointly; and who are still completely loyal to the party's direction.

In preparation for the 2018 Carlisle Conference, we sensed an important opportunity to examine this topic, which had received relatively little attention but is so central to understanding PLA modernization. The opportunity came 10 years after our last study of the people of the PLA. The time was right to assess initial results and consider the implications of future

developments. The authors of this volume provide their very best insights into these matters, and we sincerely hope their conclusions serve other studies of China, the PLA, and its people.

THE PLA AND THE PARTY: STRUCTURAL CHANGES AT THE BEGINNING OF THE XI ERA

In the first chapter of the opening section of the volume, Morgan Clemens and Benjamin Rosen assess the impact of recent political work reforms within the PLA as Xi Jinping and the CPC look to ensure the military's compliance with approved political thought and practices. The authors profile the factors driving the effort to strengthen the PLA's political work and judge the policy implications. The authors note that the reforms will increase the party's control of the PLA, but they question the operational implications of further centralized decision-making and restraints placed on a commander's initiative in an era in which the pace of warfare has dramatically accelerated. Clemens and Rosen also analyze the practical effects of creating the CMC Political and Legal Affairs Commission (CMC-PLAC) to combat corruption in the PLA when little is known about the effectiveness of lower-echelon Political and Legal Affairs Committees (PLACs) in doing so. The chapter further considers whether the new political work system can deal with the burden that comes with having responsibility for personnel management and talent development for the PLA. At their core, these reforms seek to ensure military commanders do not let their political awareness and responsibilities atrophy because they focus solely on warfighting. In a similar vein, the reforms encourage political cadres not to give

up leadership responsibilities, by concentrating only on managing resources or addressing soldier morale. Ultimately, the party seeks to develop personnel who are expert in both political and military matters.

Chapter two, by David C. Logan, profiles Rocket Force personnel, as a case study of the impacts of personnel reform more broadly. As noted, the slate of PLA reforms in 2015 included the replacement of the Second Artillery Corps with the Rocket Force as the organization responsible for China's land-based missiles, both nuclear and conventional. China has sought to modernize and professionalize simultaneously the Rocket Force while ensuring resolute loyalty to the party. In the process, the PLA has placed greater emphasis on recruiting women and those with college educations for the force, recognizing the technical demands that serving in these units requires. This emphasis creates a special problem. Better educated and more technologically savvy soldiers entrusted with some of the PLA's most sensitive assets require more careful screening to ensure these recruits to the Rocket Force are politically suitable. Logan argues that prioritizing loyalty over effectiveness might lead to a force that is less capable and more aggressive in nature. Regardless of the long-term effects that emphasizing political reliability might have on the PLA's operational effectiveness, current trends seem to show that the Rocket Force enjoys something of a preferential status within the PLA. The Rocket Force's elevation to service level, expansion of its structure, promotion rates of its personnel, and appointment of its alumni to very senior positions throughout the PLA and China's defense enterprise suggest the force is gaining in prestige and power.

Eric Kiss concludes this section of the volume by conducting a thought experiment that seeks to shed light on how the PLA might manage the challenges that come with operating bases in overseas locations. His imagined scenario places PLA personnel deployed in a foreign country on the horns of a dilemma in which they must choose between protecting their forces and not alienating the host-nation populace. Kiss examines whether the PLA has the requisite foreign area expertise, legal support, and contracting authorities for managing the vast array of political, legal, and economic issues with host-nation authorities that will help define the legitimacy of the PLA's presence in that country. These questions are particularly relevant as China has signaled that it may break with past practice and seek an increased number of basing arrangements with host nations. Eschewing multilateral mandates for its additional foreign posture means China will have to deal directly with the concerns this posture will generate. With respect to foreign area expertise, the PLA is hamstrung by its efforts to insulate its units and leaders from contact with foreigners. Whether out of concern for maintaining ideological purity or ensuring positive control over personnel, this clear tendency increases the difficulty of assessing the degree to which skills such as foreign language expertise extend into the ranks of the PLA. The PLA's ability to deal with complex problems while based in foreign countries is inhibited by unclear and less developed legal regimes. PLA regulations and laws do not have provisions that signal intent to comply with international standards, implement status of forces agreements or include provisions for regulating the operations of overseas bases. In particular, the process of local contracting is likely to rely solely on private Chinese businesses

for sustainment operations, irrespective of the inefficiencies that such an approach might bring. Such basic structural and procedural shortcomings would seem to put forward-deployed PLA personnel in difficult positions as they face challenging realities on the ground at new overseas bases.

EDUCATION AND CIVIL-MILITARY RELATIONS

This section of the volume undertakes a critical examination of education and professional development in the PLA. The authors of the three chapters successively examine the general state of PLA education and its drive to leverage better China's civilian education system, the challenges of professional military education within the PLA, and the struggles of PLA veterans after their service has ended. American and partner-nation readers will recognize in each of these chapters the familiar issues that confront the PLA and the unique aspects that are likely to constrain its continued development and progress.

For about 20 years China and the PLA have recognized that modern "informatized" war requires soldiers who are more technologically savvy. China and the PLA knew that improving human capital was at least as important as fielding new, high-tech equipment. In chapter four, Brian Waidelich and Bernard D. Cole trace the PLA's long march to draw more of its servicemembers from civilian educational institutions to achieve this end. In 1999 the PLA began to recruit more college graduates and started a Chinese-style reserve officers' training corps program to commission officers from China's best

civilian universities. The PLA also revised many of its policies to encourage college graduates to join the PLA. By 2010 the PLA appeared to have achieved much success: 80 percent of its officers had four years of college education, compared to only about 25 percent in 1998. Building on this success, in 2010 the PLA established a further goal of having 60 percent of newly commissioned officers come from civilian universities. But the PLA missed this target for many years, and by 2017 had ended the primary national program intended to commission officers from civilian universities, turning instead to direct recruitment of those already graduated. The ways in which the PLA will deal with the many issues that led to the old program's demise or ensure civilian college graduates are appropriately accessed and transitioned to military service are not at all obvious, suggesting that further refinements of the plan may be in store. The authors also discuss the difficulties facing the PLA as it tries to raise the professional profile of its noncommissioned officers (NCOs) and civilian employees. In so doing, the PLA must contend with a national culture that tends not to value military service highly, especially that of personnel other than officers. Moreover, the PLA must also address how to ensure the political reliability of graduates of civilian universities. All of these factors make the future relationship between civilian education and the PLA an uncertain one.

Kenneth Allen and Dr. Brendan Mulvaney of the China Aerospace Studies Institute at the National Defense University conduct a deep dive of the PLA's professional military education system in chapter five. As they point out, the PLA does not use the term "professional military education," preferring instead a term (with many variations) Allen and

Mulvaney translate as “cultivation and training.” Despite recognizing since 1999 that it needs a better educated force, and even with additional emphasis from Xi Jinping on military education reform, the PLA still has much to do before it can claim a professional education system on par with that of a “world- class military.” Nearly all officers and enlisted personnel are taught solely within their own specialty. Very few members of another branch or career field are schooled together, even within a single service. A similar lack of joint education across the various services of the PLA is also evident. Officers typically do not receive formal joint education until they are quite senior, at the level of deputy corps-level flag officers. Put together, this lack of focus on joint education calls into question the PLA’s professed commitment to establishing and improving jointness. Until the PLA can break the military education system out of its career specialty confines, it will remain saddled with a significant hindrance to creating a true joint force.

As the PLA struggles to bring in better-educated people and to educate those already in its ranks, it also struggles with how to treat those who have left the military. In fact, veteran protests are a persistent and widespread problem that typically does not garner much attention outside China. In chapter six, Neil J. Diamant examines the dynamics of veteran protests in China and what this issue means for China. Until 2018 Beijing preferred to deal with veteran protests at the local level. As China lacks laws that clearly spell out veterans’ benefits, the CPC prefers to let provincial and lower-level officials handle veterans’ concerns by using a mix of repression and payoffs. In 2018, however, with little explanation, China established a veterans’ affairs ministry. Time will tell whether

this ministry will be resourced to address veterans' concerns in a meaningful way or whether it is just a new tool for controlling the problem of disruptive veterans. Diamant argues that veteran protests counter the simplistic image of every Chinese citizen as a nationalist and ardent follower of the CPC. He concludes that the issue of veterans' affairs actually represents a possible area of common interest between the United States and China where the United States could offer productive lessons from its own experience with veterans.

PREPARING TO FIGHT AND WIN

The authors of this section's chapters examine how the PLA is attempting to turn military education reforms into concrete improvements in the readiness of its people. Whether these attempts are for building expertise in joint operations, sharpening skills for information warfare, or preparing for the demands of modern warfare, the PLA has charted an ambitious course toward readying its personnel to fight and win the next war.

Kevin McCauley examines military educational reforms targeting the development of joint commanders and staff as well as efforts to improve joint training. Qualified joint officers and a well-trained joint force would be fundamental requirements for transforming the PLA into a "world-class military" by mid-century. The PLA intends to instill a general level of joint knowledge throughout the entire military as joint operation capabilities are pushed down to the tactical level. Although the detailed outline of these reforms is known, the full extent and quality of implemented reforms is difficult to gauge. One

such reform is a “triad” military education program to reform military educational institutions and the joint curriculum through three components: military academy education, professional military education, and unit training practice. The three components are not new, but the current reform is attempting to update and integrate the elements into a holistic system of systems that would cultivate the necessary personnel expertise in joint operations to achieve the PLA’s fundamental transformation to a joint force. Importantly, the PLA intends to closely integrate military academic institutions with unit training, believing that the interaction will benefit both areas. The PLA also intends to improve joint training through replicating realistic combat conditions and by expanding simulation/war-gaming centers and battle labs.

In chapter seven, John Chen and James Mulvenon discuss another path the PLA is taking to build virtual combat experience: personnel training exchanges with foreign militaries. Such exchanges involve sending personnel abroad to study in foreign military institutions, sending personnel to participate in foreign training exercises on an individual or small group basis, or the participation of PLA units in foreign exercises, also known as combined exercises. The PLA seems to emphasize participation in foreign training exercises, which provide exposure to high-stress operating conditions that schools typically do not provide. Participation in foreign exercises also constitutes an important form of military diplomacy for the PLA. In an exercise setting, PLA personnel and units are more readily able to demonstrate their military power, providing a shaping and deterrent effect on other participating nations. As with any

activity that brings it into contact with foreigners, the PLA emphasizes party control and selects its best and most politically reliable personnel for such exchanges. Whether the PLA's political work apparatus is up to the organizational challenges posed by the PLA's growing desire for foreign training exercises remains to be seen.

Joe McReynolds and LeighAnn Ragland-Luce conclude this section by profiling the human capital ecosystem that underlies the PLA's development, acquisition, and operational deployment of network weapons in the PLA SSF. This profile offers an opportunity to better understand China's information warfare capabilities. As of 2018, however, the personnel ecosystem for information warfare operations was in a greater state of flux than any other segment of the PLA. The creation of the SSF was only the start of a long series of organizational reforms. China's elevation of military-civil fusion to the level of a national strategy has led to the launch of new systematic initiatives that have broadened the SSF's access to civilian talent pools, while the military's technical academic institutions that have historically focused on network and electronic warfare research have been completely reorganized. At the same time, the drive to ensure the SSF is younger and more skilled than the traditional PLA services runs up against the higher pay and prestige that China's civilian government and private sector can provide. In short, the Chinese military is embarking on a massive reordering of its human capital ecosystem for information warfare while having to compete to retain its top people.

The volume concludes with a special tribute to Ellis Joffe, who passed away in 2010. As Dr. Cynthia

Watson of the National Defense University notes, Joffe's work was foundational to the field. In addition to his many seminal works on Chinese military and politics, Joffe helped found this conference series. Given his emphasis on understanding the people of the PLA and their relationship to it, the party, and the state, the inclusion of a tribute to him is only fitting. We sincerely hope his example of persistence, expertise, and scholarship will inspire the next generation of China scholars to work hard to understand the complexity of Chinese political-military affairs.

1. THE IMPACT OF REFORM ON THE PLA'S POLITICAL WORK SYSTEM

Morgan Clemens and Benjamin Rosen

This chapter examines major reforms in the People's Liberation Army's (PLA) political work system since 2015, assessing the issues and concerns driving these changes as well as the implications they carry for the PLA's future development and effectiveness.¹

MAIN ARGUMENT

A key feature of the Xi Jinping era has been a focus on strengthening and revitalizing political work in the PLA, with the dual objectives of both enabling the PLA to “fight and win” under modern conditions as well as strengthening political control over the armed forces. A key factor driving this effort is a broader concern over the deleterious effect rampant corruption has upon the PLA's operational effectiveness, political loyalty, and general reputation in society. In practical terms, the attempt to curb this corruption has meant downsizing, reorganizing, and consolidating the former General Political Department (GPD) and distributing its functional responsibilities across multiple new and preexisting organizational structures. This effort has also entailed renewed emphasis on assuring the operational command and decision-making role of party committees and on developing the professional military skills of political cadres.

1. The authors would like to thank Susan Lawrence of the Congressional Research Service for the many useful and insightful comments she provided when reviewing the conference paper upon which this chapter is based.

POLICY IMPLICATIONS

- Revitalizing the party committee's role in commanding units and organizations will serve to strengthen the party's control of the PLA, but its impact on operations is less clear.
- A strengthened system of Political and Legal Affairs Commissions (PLACs) may provide a useful means of combating corruption and other malfeasance, but the effectiveness of the PLAC in such a role has yet to be fully demonstrated.
- Concentration of responsibility for personnel management in the hands of the political work system may prove beneficial to talent development and cultivation, but only if the political work system is adequately resourced to handle the increased burden.

INTRODUCTION

Political work is essential to the nature of the PLA, serving to hold the PLA true to its fundamental role as the armed wing of the Communist Party of China (CPC). Thus, the effectiveness of the PLA's political work system is of critical importance to the CPC, directly affecting the reliability of the party's ultimate guarantee of its power. A key feature of Xi Jinping's tenure as chairman of the Central Military Commission (CMC) has been a focus on revitalizing the political work system within the PLA, via both structural and practical reforms. Strengthening the political work system is seen as a critical component of strengthening the PLA overall, and has taken place within the context of a series of broader structural reforms intended to change fundamentally how the

PLA fights and operates, with the dual objectives of both enabling the PLA to fight and win under modern conditions as well as strengthening political control over the armed forces.

A major element of political work system reform was the dissolution in January 2016 of the former GPD, which had been responsible for directing and overseeing the PLA's political work system. The dysfunction of the GPD was epitomized by the case of General Xu Caihou, the disgraced former CMC vice chairman and director of the GPD. Xu was prosecuted for using his position within the GPD to solicit bribes from PLA officers seeking promotion and for other "serious violations of party discipline." In discussing Xu's case, official propaganda focused on how corruption in the upper echelons of the PLA affected the rank-and-file's faith in the CPC-led system, and Xi Jinping specifically cited the case as evidence of the need for reform in the PLA's political work system. (The present paper confines itself to an analysis of the PLA proper, though many of its findings are also applicable to the People's Armed Police and the broader armed forces.)

The demise of the GPD, however, is only one aspect of the broader effort to revitalize party life within the armed forces, which also encompasses the system of unit party committees headed by political commissars comprising the core and backbone of the PLA's command and leadership system. This strengthening effort predates the 2016 military reforms and has its most concrete origins in the 2014 Gutian Conference on political work. The effort's fundamental purpose is to tighten CPC control over the PLA at all levels, in part to combat rampant corruption but also to use the party's mechanisms of control as a means to

develop the PLA's operational capability and assure its obedience to party commands. Accordingly, the impact of this effort carries significant implications for the PLA's future effectiveness as both a fighting force and a guarantor of the CPC's continued hold on power.

This paper will first briefly lay out the issues and concerns on the part of China's political and military leadership driving the reform of the political work system during the Xi Jinping era, and then examine how these concerns have been translated into concrete reforms and other changes—in the context of both the dissolution of the GPD as well as the current status of the system of party committees and political commissars which pervades all elements of the PLA. The paper will end by discussing the implications carried by these changes in the political work system.

MOTIVATIONS AND CONCERNS

Upon coming to power in 2012, Xi Jinping quickly identified reform of the PLA and China's broader national defense structure as a key aspect of achieving his and the party's broader national development and policy goals. He confronted a PLA which was not ready to fight and win modern wars, which was rife with corrupt client networks formed around leading generals, which lacked "fighting spirit," and in which political/ideological work were seen as increasingly ossified and outdated. Such conditions seriously undermined the PLA's perceived reliability as the ultimate guarantor of the CPC's rule, and the PLA's political work system was identified as both a source of many problems as well as a tool for rectifying them. The fall 2014 conference on political work held at Gutian in Fujian Province, along with various policy

directives and guidance documents which flowed from it, identified and laid out many of the concerns driving the reforms affecting the PLA's political work system.

Convened on October 30, 2014, the Gutian Conference on military political work was deliberately intended to evoke the 1929 Gutian Congress, which had fully established the principle of the party's explicit command over the Red Army and emphasized the importance of political work within Red Army units.² The explicit goal of the 2014 Gutian Conference was to revitalize political work within the PLA.³ (Many sources emphasize that the original Gutian Congress sought to overcome a tendency for Red Army party committees to not focus on military work, implying that the modern Gutian Conference had to do much the same.)⁴ Over a period of days, CMC chairman Xi Jinping and others gave major addresses concerning the status and requirements of political work in the modern PLA to nearly 450 delegates, including the full membership of the CMC and leaders, political commissars, and political department directors from the four General Departments and other major units (大单位) down to the corps leader-grade, as well as

2. “古田会议 (1929年12月28-29日)” [The Gutian Conference (28-29 December 1929)] in The People's daily party history encyclopedia, September 4, 2018, <http://dangshi.people.com.cn/>.

3. Wang Shibin and Ou Shijin, “全军政治工作会议在古田召开,习近平出席会议并发表重要讲话” [Whole-army political work conference was held in Gutian, Xi Jinping attended the meeting and delivered an important speech], 解放军报 [PLA daily], November 1, 2014.

4. “党委要成为战斗力建设的领导中枢” [Party committees must become the leading center of combat effectiveness construction], 解放军报 [PLA daily], December 5, 2014.

other relevant cadres (officers) and representatives of the Ministry of Public Security.⁵ In his remarks at the conference, Xi Jinping emphasized the continued vitality and relevance of political work within the PLA, summarizing its key role in sustaining the Eleven Insists (十一坚持), a set of principles emphasizing the PLA's subordination to the party, discipline, and fighting spirit, including

- the party's command of the gun;
- serving the people;
- "seeking truth from facts" (实事求是);
- adhering to the mass line (群众路线);
- using scientific theory to arm the PLA;
- surrounding the core of the party and the military with a guarantee of service;
- adhering to the fair and decent selection of cadres;
- the egalitarian togetherness of officers and soldiers;
- maintaining strict discipline;
- adhering to revolutionary spirit and sacrifice; and
- the leadership of party members and cadres.⁶

More broadly, the Gutian Conference and related propaganda commentaries identified a number of problems on which PLA political work (and reform of the political work system) were to focus. These issues include the "four firmly establishes" (四个牢固树立起来), which focused on fostering a good image on the part of cadres, more clearly and fairly enforcing

5. Wang Shibin and An Puzhong, "全军政治工作会议在古田闭幕" [All-army political work conference concluded in Gutian], 解放军报 [PLA daily], November 2, 2014.

6. Wang Zihui, "强军□习近平最重视啥?" [In a strong army, what does Xi Jinping value most?], 新华 [Xinhua], August 1, 2016.

discipline and regulations, modernizing political work to ensure its vitality and its relevance in a modern military environment, and developing cadres who are both professionally competent and politically reliable.⁷ Also identified were various outstanding problems the PLA needed to resolve, including the presence of cadres who only mouthed or feigned their loyalty to the party, the perceived growth in Western and liberal ideas about the non-political nature of armed forces, poor implementation of the PLA's system of collective leadership within the unit party committee structure, poor personnel selection and promotion practices, and corruption contributing to abuses of power and breakdowns in discipline (as in the case of General Xu Caihou).⁸ Throughout early 2015, a wide range of party and PLA publications featured articles discussing ways of implementing reforms to the political work system, typically referencing Xi's remarks at the Gutian Conference, and to advocate for or justify specific changes or areas of focus. These publications were accompanied by a raft of official opinions, resolutions, and other policy guidance which further delineated specific issues relating to the reform and development of the political work system post-Gutian.

In practical terms, Xi Jinping and the PLA leadership were laying out their vision for what the political work system should be and how it had to change to achieve the overall goal they had laid

7. Wei Liang, “按照“四个牢固树立”创新政治工作” [Innovate political work in accordance with the “four firmly establishes”], 解放军报 [PLA daily], May 19, 2015.

8. “军报刊文：以刮骨疗毒的勇气搞好整改” [PLA daily article: Doing reform well by having the courage to scrape the bones to treat the poison], 新华 [Xinhua], February 27, 2015.

out for it—namely, supporting and fostering the development of “a people’s army that listens to the party’s command, can win battles, and has a good work style” (建设一支听党指挥、能打胜仗、作风优良的人民军队).⁹ This undertaking involves several key elements, foremost among them increasing the party’s authority within the PLA by improving the image and reputation of its cadres, especially its political cadres. These improvements mean attacking corruption that undermines the reputation and authority of the party structure within the military, while strengthening the influence of political cadres at the grassroots level by cultivating an image of integrity.¹⁰ Xi Jinping said in April 2013 that this corruption, often referred to as the “four winds” (四风), afflicts all elements of the party, both inside and outside the military. The four winds are formalism (形式主义), bureaucratism (官僚主义), hedonism (享乐主义) and extravagance (奢靡之风).

Political cadres are required to act as models for their fellow servicemen to follow and must be seen to carry out the basic duties of being a soldier alongside them. At the grassroots level in particular, political cadres must actively seek to study, work, exercise, and relax together with the men of their units, thereby building up their own image and influence

9. Zeng Huafeng et al, “《关于新形势下军队政治工作若干问题的决定》要点释义” [Key points of the resolution on several issues concerning military political work under the new situation], 解放军报 [PLA daily], February 19, 2015.

10. “习近平在同全国劳动模范代表座谈时的讲话(全文)” [Speech by Xi Jinping during a discussion with representatives of the national model workers representatives (full text)], 新华 [Xinhua], April 28, 2013.

while keeping abreast of social and psychological conditions.¹¹

Related to rebuilding the political work system's prestige is the task of fostering rule of law in management at all levels, necessitating the strengthening of the PLA's investigatory and discipline inspection capacity so as to combat corruption and clientelism and to ensure decisions related to personnel selection, promotion, procurement, etc., are made in accordance with established procedures.¹² To this end, the reporting system for unacceptable views and actions must be strengthened to aid investigations and prevent lying to authorities, the spreading of rumors, attempts to bargain with authorities (rather than simply submitting to lawful orders), unauthorized determination of important matters, and other activities which serve to undermine both discipline and political reliability.¹³

Post-Gutian directives also make clear the importance of improving the political work system's ability to function effectively during operations and the ability of commissars and the party committees to guide and direct operations. As stated by the CMC, in the PLA "political organs are command organs

11. CMC, 关于建设对党绝对忠诚、聚焦打仗有力、作风形象良好政治机关和政治干部队伍的意见 [Opinions on building the ranks of political organs and political cadres with absolute loyalty to the party, a focus on fighting, and a good workstyle image] (Beijing: CMC, April 2, 2015).

12. Zhao Dongbin et al., "《中央军委关于新形势下深入推进依法治军从严治军的决定》要点释义" [Explanation of the main points of the Central Military Commission resolution on deeply advancing the rule of law and strictly administering the Army under the new situation], 解放军报 [PLA daily], April 22, 2015.

13. CMC, Opinions on building the ranks of political organs.

[and] political cadres are command cadres” (政治机关是指挥机关、政治干部是指挥干部), and political workers should measure their own contributions by how much they aid combat effectiveness.¹⁴ At the personal level, political cadres must develop their own operational capacity by regularly participating in military exercises alongside military cadres and developing their fundamental military skills, which include “operating equipment, communicating via networks, instructing by means of technology platforms, organizing training in the field, and commanding in battle.”¹⁵ This focus on operational capability also extends to units as a whole, as indicated by a GPD-issued opinion from March 2015, requiring party committees at all levels to make improving unit combat effectiveness a main focus of their work.¹⁶

Finally, the overall quality of the political work system, especially its practices, must be improved. This improvement would mean, as noted above, ensuring political cadres were proficient in their duties as well as improving the tools at their disposal for carrying out those duties, especially in regard to informatization. In particular, the PLA and CPC are highly aware of the fragmented and decentralized nature of new media, which enables the dissemination

14. CMC, *Opinions on building the ranks of political organs*.

15. Zhang Lianguo, “下大力提高政治干部队伍建设水平” [Vigorously improve the level of construction of political cadres], 解放军报 [PLA daily], January 9, 2018.

16. “经习近平主席批准总政治部印发《关于在党委领导工作中贯彻落实战斗力标准的意见》” [With the approval of Xi Jinping the GPD issues opinions on implementing the combat power standards in the leadership work of party committees], 解放军报 [PLA daily], April 3, 2018.

of a wider range of views, opinions, and ideas.¹⁷ The ease with which information can be disseminated constitutes a threat to the party-state's ideological and discourse dominance and makes relying solely upon legacy propaganda mechanisms such as printed materials and in-person study sessions very difficult. In the PLA's view, political cadres must expand the use of political work information systems to modernize ideological education, discipline inspection, and other aspects of their work.¹⁸

Ultimately, these concerns and objectives are guiding and directing the development of the PLA's political work system in the Xi Jinping era. The focus is foremost on strengthening the image and reputation of political cadres (and by extension that of the party), but it also encompasses the capacity of the political work system to enforce ideological conformity and policy adherence, promote the development of the PLA's capabilities in all areas, and provide effective leadership by means of the party committee system in peace and war. In the wake of the Gutian Conference, these concerns have been translated into substantive action and reforms at all levels, encompassing a restructuring and fracturing of the PLA's top-level political work components as well as more practical changes within the party committee system at all levels. The following two sections of the paper deal with these changes and reforms, first examining the fate of the former GPD and then analyzing how

17. Wang Xiaoyan, “新媒体的思想政治教育功能初探” [An examination of the function of ideological and political education in new media], 军事记者 [Military reporter], October 26, 2017.

18. CMC, Opinions on building the ranks of political organs.

political commissars and party committees have been affected.

THE DEMISE OF THE GPD AND ORGANIZATIONAL RESTRUCTURING

A key objective of the earliest reforms in 2016 was restructuring the PLA's top components, especially those directly under the purview of the CMC. This entailed, among other measures, abolishing the former General Departments, creating several new administrative and management organs directly under the CMC, and reconfiguring the seven former Military Regions into five Theater Commands (TCs). This new set-up, described as the CMC chairman responsibility system (军委主席负责制), is designed to maximize the direct authority and oversight which paramount leader Xi Jinping (as CMC chairman) exercises over the PLA, thereby ensuring "the party's absolute leadership over the military is more centralized and unified."¹⁹ The wholesale transformation of the former GPD into the current Political Work Department (PWD) of the CMC as part of the 2016 reforms has profoundly altered the nature, focus, and responsibilities of the new organization. The new PWD seems to be considerably diminished in size in comparison to its predecessor, with its second-level components downsized from departments (部) to bureaus (局), likely reflecting the loss of personnel attendant upon the PLA-wide 300,000-man downsizing that accompanied the 2016 reforms. Of course, a significant proportion of the personnel taken away from the GPD/PWD was likely transferred to form the political work organs of the

19. "变与不变的二重奏" [Duet of change and constancy], 解放军报 [PLA daily], September 26, 2016.

newly established PLA Army service headquarters, so it does not represent a net loss to the PLA's political work system as a whole.

In addition, the PWD has undergone considerable changes in terms of its functional responsibilities, including both losses and additions. The PWD has been stripped of its predecessor's discipline inspection, judicial, and counterintelligence functions, while simultaneously gaining new personnel management responsibilities and seeing its propaganda elements reorganized and consolidated (the status of its inherited intelligence component is less clear, though intelligence activities remain an integral part of

political work).²⁰ The overall picture presented is that of an organization which, in comparison to the former GPD, has been, if not emasculated, then at least de-operationalized and reduced to a top-level propaganda organ and human resources department.

In the propaganda realm, various components of the former GPD have been consolidated, the bureaucratic overhead has been reduced, and propaganda work has been modernized. The PWD's Cultural Arts Center (文化艺术中心) was formed by merging the former GPD's various artistic and creative components (these included the former Bayi Film

20. Although unofficial Chinese- and English-language sources do describe a PWD Liaison Bureau (联络局) as the successor to the former GPD Liaison Department (联络部), the authors were able to identify only one official source referring to such an organization, dating from March 2017: Wang Hongyue and Zhou Xiangyu, “坚决贯彻习主席重要指示和军委决策部署 高标准高质量落实火箭军改革任务” [Resolutely implement the important instructions of Chairman Xi and the CMC's decisions for high-standards and high-quality implementation of Rocket Force reforms], 火箭兵报 [Rocket Force news], March 1, 2017, 1. Thus, the fate of the Liaison Department and its attached 311 Base for political warfare is unclear, though Western sources have speculated that the 311 Base was transferred to the Strategic Support Force. Notably, an *Epoch Times* article from December 2016, citing unnamed military sources in Beijing, states that, except for some personnel specifically engaged in intelligence work (体情报工作的人员) who were transferred to the Strategic Support Force, the whole staff of the former GPD Liaison Department was being converted into civilian, non-active duty personnel (前总政联络部全部人员转为文职非现役) and merged with the CPC's own International Liaison Department. The authors of this paper could not identify any sources corroborating this contention, which (combined with the nature of the original source) means its veracity is at best uncertain; and “传中共总政联络部与中联部合并” [The GPD Liaison Department merges with the Central Liaison Department], *Epoch Times*, December 26, 2016.

Studio, which was renamed the Film and Television Production Department (电影电视制作部), as well as the former GPD Song and Dance Troupe (原总政歌舞团), the former GPD Opera Troupe (原总政歌剧团), the former GPD Drama Troupe (原总政话剧团), and the former GPD Orchestra (原总政军乐团), which were all combined into the Center's Literature and Arts Department (文艺部).

The PWD's various media components were organized into a News Dissemination Center (新闻传播中心) in 2018 (these include the original PLA Television Propaganda Center (电视宣传中心), the PWD's Cultural Network Center (政治工作部文网中心), the PLA Publishing House (中国人民解放军出版社), and the *PLA Daily* organization (解放军报社).

The Network Public Opinion Bureau (网络舆论局) was formed in January 2016, most likely from components of the former GPD Propaganda Department (now downsized to the PWD Propaganda Bureau). The Network Public Opinion Bureau is responsible for shaping and controlling public opinion by means of the internet. The bureau's first director, Zhang Yutang, became director of the PWD's Propaganda Bureau (宣传局) in July 2017, and was succeeded by Guo Shulin, who previously served as deputy director of the former GPD Propaganda Department.²¹ Little is known, as yet, about the specific work of the Network Public Opinion Bureau, but its formation is a function of the premium which the PLA (and the larger party-state system) places upon monitoring, shaping, and controlling public opinion in all forms of media. In particular, the bureau's creation likely reflects the desire to adapt the PLA's

21. Li Yan, "中央军委政法委今年有新任务" [The Central Military Commission Political and Legal Affairs Commission has new tasks this year], *Sohu News*, January 2, 2018.

propaganda system to current social and technological conditions, by creating an entity explicitly dedicated to handling online discourse.

One component of the PLA's larger military reporting system, the Network-Related Military Reporting Platform (网络涉军举报平台), which was launched on November 19, 2017, is directed (指导) by the Network Public Opinion Bureau, though actually operated by the PLA's official website (www.81.cn).²² Notably, official sources do refer generically to "network public opinion departments at all levels" (各级网络舆论部门), though no reference can be found to specific bureaus within the service or theater PWDs, increasing the difficulty of determining whether the PWD's bureau is the apex of a full network public opinion *xitong*.²³ In addition, although it is more than a decade old, the All-Army Political Work Network (全军政工网) is another critical tool enabling the PWD and the political work system to control and direct military media activities in the era of big data, informatization, and media proliferation. The precise delineation of responsibilities between the all-army network and the service-level political work networks is unclear, though those networks are seemingly not being de-emphasized in any way, as an Army Political Work Network (陆军政工网) was apparently created as part of the 2016 reforms. The network is used to coordinate messaging with a wide

22. Yan, "The Central Military Commission."

23. See Fei Shiting, "永远不能变永远不能丢—中部战区陆军某合成旅坚持党指挥枪的根本原则和制度铸牢军魂新闻调查" [Forever unchanging, forever unlosable—A combined arms brigade of the Central TC Army adheres to the fundamental principle and system of the party commanding the gun], 解放军报 [PLA daily], July 26, 2018, for such a generic reference.

range of both military and nonmilitary websites and news sources in the creation and distribution of different kinds of content, so as to “create an ‘omnipresent’ propaganda effect” (形成了“铺天盖地”的宣传效应).²⁴ A specific example includes the mobilization of the network after the 2015 Tianjin port explosion to both quash rumors and push articles depicting search and rescue operations, to “criticize wrong views, clarify fuzzy understanding, and effectively guide online public opinion” (批驳错误观点, 澄清模糊认识, 有效引导了网上舆论).²⁵ Political work networks—which exist at most levels of command—are also used for political study, ideological indoctrination, and other political work tasks. A June 2017 *People’s Navy* article describes the political work organs of units in the North Sea Fleet using a particular base’s political work network (基地政工网) as well as ship-to-ship broadcasts to organize and carry out a study of a recent Xi Jinping speech. The article notes that one of the ships involved was actually at sea conducting operational training, so personnel used various audiovisual materials and tools to lead the study of the speech, something they had never done up to that point.²⁶

The changes described above constitute a simple reorganization of the management of long-established components of the political work *xitong*. More significant is the PWD’s gained responsibility for the

24. “做好新闻舆论工作必须把握的‘度’” [To do news and public opinion work well we must grasp “degrees”], 军事记者 [Military reporter] no. 5 (2017).

25. “To do news and public opinion work well.”

26. Lin Wenjie and Li Ding, “北海制从某基地—坚定强军意志交上优秀答卷” [At a North Sea Fleet base—Firm will of a strong military, and handing over excellent orders], 人民海军 [People’s Navy], June 6, 2017.

management of enlisted personnel affairs, in addition to the former GPD's existing responsibility for cadre and civilian personnel management, making the PWD and subordinate PWDs responsible for the complete personnel portfolio in the PLA. Following the 2016 reforms, the PWD now has both a Cadre Bureau for the management of officer personnel and an Enlisted and Civilian Personnel Bureau (兵员和文职人员局), an arrangement repeated in the PWDs of each of the services and the TCs. The political work system's newfound responsibility for enlisted personnel is a product of the ever-increasing emphasis placed on talent cultivation and the improvement of personnel quality, for which political work organs and the party committees have been given primary responsibility. But even as the political work system's responsibility for overseeing and managing personnel education and development has increased, the political colleges formerly subordinate to the GPD (in Nanjing and Xi'an respectively) have been transferred to other authorities, first to the CMC Training Management Department in 2016, and then as separate campuses of the National Defense University Political College (国防大学政治学院) in 2017 (see figure 1-1).

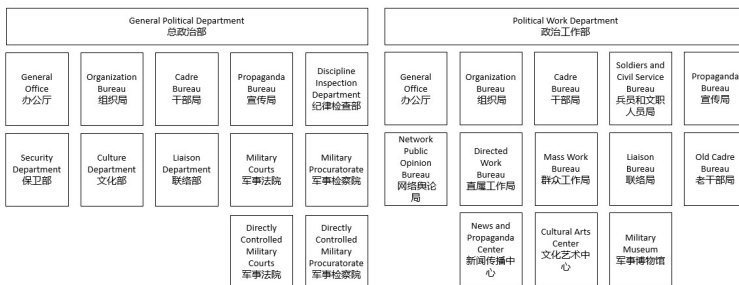


Figure 1-1. GPD/PWD organizational components pre-reform and post-reform

Arguably the most significant aspect of the transition from GPD to PWD has been the transfer of the former organization's discipline inspection, judicial, and counterintelligence functions to newly formed (or newly independent) entities directly under the CMC, including the Discipline Inspection Commission and Political and Legal Affairs Commission. These reforms are intended to "scientifically . . . allocate power according to the principle of mutual control and coordination of decision-making, implementation, and supervision" and enhance the CMC's supervisory and disciplinary powers by strengthening the independence of its discipline inspection, audit, and legal affairs components from the entities which they are intended to oversee.²⁷ These efforts are part of "a fundamental policy to strengthen the restriction and supervision of power" by ensuring units and organizations are not solely responsible for disciplining themselves, all in service of Xi Jinping's larger call (applicable to every element of the party-state) for power to be caged within systems.²⁸ Such changes are a direct response to the rampant corruption which afflicted the pre-reform GPD, exemplified most egregiously by former GPD director Xu Caihou. By removing the PLA's in-house investigatory and discipline inspection elements from one of its most corrupt organizational components and placing them directly under the CMC chairman's

27. "变与不变的二重奏" [Duet of change and constancy], 解放军报 [PLA daily], September 26, 2016.

28. Wu Changde, "积极适应我军领导指挥体制改革新要求" [Actively adapt to the new requirements of the reform of the PLA's leadership system], 求实 [Seeking truth] no. 12 (2016). At the time of publication, the author was a deputy director of the CMC PWD.

supervision, the reforms are intended to reduce the likelihood that corrupt officers will be able to interfere with disciplinary matters, thereby increasing the PLA's institutional capacity to combat corruption while also strengthening party control and military discipline. Notably, a 2017 *CMS* article on political and legal affairs work states that the primary problem in the Guo Boxiong and Xu Caihou cases was not their corruption per se, but rather that "they violated the political bottom line and caused great harm to the political ecology of the troops."²⁹

The Political and Legal Affairs Commission System

The CMC Political and Legal Affairs Commission (军委政法委员会) (CMC-PLAC) combines various elements of the PLA's judicial, counterintelligence, and security apparatus that were formerly components of the GPD. These components include the Military Procuratorate, the Military Court, and the Military Prison, which together constitute the PLA's judicial arm. Beyond these, the CMC-PLAC also includes (in addition to a General Bureau and a Political Work Bureau) a Security Bureau (保卫局), which is the successor to the former GPD Security Department (总政保卫部). As such, it likely carries forward that department's counterespionage and counterintelligence responsibilities.

Although the CMC-PLAC is a newly established organization, it oversees a system of PLACs which has long been in existence. Chinese military publications date the origins of the system to the early 1980s,

29. Wu Zhifeng, "新时代军队政法工作职能定位研究" [Roles and responsibilities of military political and legal work in the new era], *中国军事科学* [China military science] no. 6 (2017): 98.

when the PLA formed political and legal affairs work leading organs (政法工作领导小组). In 2003, most organizations at or above the regiment leader grade established political and legal affairs work leading small groups (政法工作领导小组), which became PLACs in 2007.³⁰ Although these commissions did already exist at the unit level, the PLA nonetheless depicts them as undergoing a fundamental shift in nature simultaneous with the establishment of the CMC-PLAC in 2016. Most particularly, the work-unit PLACs (单位政法委) were adjusted (调整) into a regionally organized system combining PLACs belonging to unit party committees, military courts, and military procuratorates.³¹ Thus, the formation of the CMC-PLAC represents something more fundamental than the simple sequestration of the PLA's law-enforcement components, namely the creation of a new security-focused *xitong* permeating all elements of the PLA, operational, administrative and otherwise.

The breadth of the PLAC system's responsibilities is laid out in an article published in *China Military*

30. Online sources indicate that after the 2016 reforms, Liu Xunyan (刘训言), former director of the GPD Security Department, became a vice secretary of the CMC-PLAC, while Lu Chungeng (陆春耕), a former deputy director the GPD Security Department, became director of the CMC-PLAC's General Bureau (军委政法委综合局). “原总政治部保卫部部长刘训言少将任军委政法委副书记” [Former GPD Security Department director Major General Liu Xunyan serves as vice secretary of the CMC-PLAC], *thepaper.cn*, August 21, 2018, <https://www.thepaper.cn>; and “原总政保卫部副部长陆春耕任军委政法委综合局局长” [Former GPD Security Department deputy director Lu Chungeng serves as director of the General Bureau of the CMC-PLAC], *inews.ifeng*, August 31, 2016 <https://inews.ifeng.com>.

31. “战区和军兵种党委政法委员会有何不同” [What is the difference between theater command and service political and legal affairs commissions?], *解放军报* [PLA daily], July 2016.

Science in late 2017, which describes the system's role as defending the principle of the party's absolute leadership over the military, upholding and enforcing the CMC chairman responsibility system, resisting political infiltration by hostile forces, investigating political cases and other problems, and generally ensuring the principle of "the party commanding the gun" remains firmly rooted.³² Regarding the preservation of the CMC chairman responsibility system, political and legal affairs work is described as "the 'knife handle' [刀把子] that the party directly grasps." This work ensures the whole of the PLA consistently obeys the CPC Central Committee, the CMC, and Chairman Xi personally.³³ In this vein, PLACs are tasked with investigating anything that undermines operational effectiveness, such as major training accidents, dereliction of duty, or corruption. The commissions serve to "purify the combat power generation environment" (净化战斗力生成环境), thereby supporting the larger preparation for military struggle.³⁴ To this end, a Network-Related Military Crime and Adverse Information Reporting Platform (网络涉军违法犯罪和不良信息举报平台) was launched on January 1, 2018, having been "organized and built" by the CMC-PLAC's Security Bureau.³⁵ Notably, sources

32. Zhifeng, "Roles and responsibilities," 97.

33. At the time of publication, the article's author was an associate professor at the National Defense University, where he was director of the Military Criminal Investigation Teaching and Research section of the Security Work Department in the National Defense University's Political College (国防大学政治学院军队保卫工作系军队刑事侦查教研室); and Zhifeng, "Roles and responsibilities," 97.

34. Zhifeng, "Roles and responsibilities," 98.

35. Zhifeng, "Roles and responsibilities," 99.

specifically link the CMC-PLAC's reporting platform with that of the PWD's Network Public Opinion Bureau (discussed earlier), implying that their functions either overlap or are at least broadly similar, though without offering any specific delineation of responsibilities between them.³⁶

In addition to assuring the efficacy and authority of the PLA's command and administrative linkages, the PLAC system is also responsible for "resolutely resisting the political penetration of hostile forces" (坚决抵御敌对势力政治渗透), which means human espionage capitalizing on potential traitors and defectors. This counterintelligence work involves collecting intelligence, tracking enemy movements, and identifying potential channels of penetration, as well as assessing and keeping close tabs on units and individuals, especially those occupying critical roles and positions.³⁷ This responsibility for assuring the security of command organs (specifically referred to as "defending the core and defending the vitals" [保核心、保要害]) includes overseeing the security education and management of personnel holding top leadership positions and the establishment of security technology defenses (安全技术防线), presumably referring to counter-cyber and other technical measures.³⁸

Finally, the PLACs are responsible for more typical legal work in that they provide legal support (法律保障) for all kinds of major military activities, including exercises, disaster relief, stability, and combat operations, as well as the use of military forces overseas. This work entails providing legal

36. Yan, "The Central Military Commission."

37. Yan, "The Central Military Commission."

38. Zhifeng, "Roles and responsibilities," 98.

advice and actively participating in the “military operations decision-making process” (军事行动决策过程).³⁹ This responsibility applies even in the case of sudden contingencies and emergency situations, and is part of the larger effort to foster adherence to the rule of law, both within the PLA and across the larger party-state. The coordination functions of PLACs extend to civilian governments and political organs, as indicated by theater-wide cooperative meetings (协作会议) attended by representatives of civilian provincial governments. These meetings are described as being focused on fostering the development of military and civilian cooperation, including new platforms, new measures, and new mechanisms.⁴⁰ In the same vein, in late 2016, the Southern TC Party Committee’s PLAC established a TC military-local cooperation platform (战区军地协作平台), undertook overall planning of the coordination of “military rights defense work” across the six provinces within the TC’s area of responsibility, and “formed a four-level, military-local intercommunication setup” (形成四级联动、军地互通的格局).

In achieving these objectives, PLACs at all levels are intended to play complementary roles with one another, as the main responsibilities of the party committee PLACs vary by level in accordance with the larger tripartite CMC-TC-services division of responsibility enacted by the 2016 reforms. The TC PLACs are “mainly responsible for political and legal affairs work in wartime and major military operations, [and] take the lead in coordinating law enforcement and regional cooperation,” while the PLACs of other

39. Zhifeng, “Roles and responsibilities,” 99.

40. Zhifeng, “Roles and responsibilities,” 100.

organizations, including the services, are “mainly responsible for crime prevention and comprehensive control, [and] maintaining the integrity and stability of the troops.”⁴¹ This arrangement is intended to be collaborative and allow the TC-PLACs and service PLACs to guide, direct, and oversee the PLACs of lower-level units.

The precise nature of the PLACs below the level of the CMC is less than clear, and they may not in fact be entirely discrete organizations unto themselves. As previously noted, the PLACs are specifically the PLACs of *danwei* party committees (whether operational units or other organizations). Accordingly, their membership necessarily overlaps with that of the party committees themselves. This overlap distinguishes them somewhat from the CMC-PLAC, which is composed of a secretary and a full-time deputy secretary, as well as the leaders of the Military Court, Military Procuratorate, and the principal leaders of the CMC-PLAC’s own bureaus, but none of whom are in fact members of the CMC itself. By contrast, in the PLACs of party committees at all other levels, the position of secretary is held by a member of the “deputy political leadership of the unit in question” (本单位政治副职领导)—in other words, by a deputy political commissar. The deputy secretaries are the leaders of the staff and political work departments, and the members are the principal leaders of the political and legal affairs departments and related functional departments (政法部门及相关业

41. “杨玉文出任南部战区政法委书记，陈家静出任副书记” [Yang Yuwen takes up the post of secretary of the Southern TC Party Committee’s PLAC; and Chen Jiajing takes up the post of deputy secretary], News.163, December 15, 2016, <https://news.163.com>.

务部门).⁴² Thus, the degree to which PLACs below the level of the CMC are actually distinct from the party committee of which it is a component is less than clear.

This lack of distinction is an important issue in that the purpose of the PLACs, in managing and overseeing legal and security work for the party committees, is seemingly to act as a check on the actions of the party committees. The commissions are described as critical elements in the task of breaking up clientelist networks, described as corruption bio-chains (贪腐生物链) that lend themselves to corruption, malfeasance, and place-seeking.⁴³ Yet if the members of the PLACs are members of the party committees in which potentially corrupt decisions are going to be made (and, even more importantly, the subordinates of the senior party committee members with the greatest capacity for potential corruption), then how independent can the PLACs be? Likewise, if unit-level PLACs are tasked with providing their party committee leadership with advice that might block an action that leadership desires to take, how is the impasse to be resolved? Can a PLAC composed of subordinates effectively serve as a check on the actions of the senior members of its own party committee? Perhaps the PLACs are primarily intended to check the actions of subordinate party committees, but this would place a serious burden on coordination between units and party committees

42. “南部战区探索建立涉军维权军地协作平台 [The Southern TC explores establishing a military rights-protection military-local coordination platform], Ministry of National Defense of the People’s Republic of China, December 9, 2016, <http://www.mod.gov.cn>.

43. “战区和军兵种党委政法委员会有何不同” [What is the difference between theater command and service political and legal affairs commissions?], 解放军报 [PLA daily], July 25, 2016.

(especially in a fast-moving operational environment) and directly contradict the PLAC's fundamental role of in-house security and oversight organ, making such an explanation seem unlikely.

THE PARTY COMMITTEE SYSTEM

The structural changes wrought upon the PLA's political work system as part of the 2016 reforms have been accompanied by changes in the nature and focus of the system of party committees and political commissars which provide the core of the PLA's command and leadership system. But these changes are primarily ones of emphasis and focus, even as the actual structure and responsibilities of the party committee and political commissar system have remained broadly consistent over time. The most significant change has been a consistent effort on the part of political and military propaganda to support the party committee's (and, by extension, the political commissar's) role in the exercise of command and leadership within units and organizations. The propaganda portrays the party committees as exercising direct and meaningful authority over practically all aspects of unit operations and administration. Although this direct control has never ceased to be the essential function of the party committees, propaganda suggests the party's confidence in the functionality and efficacy of the PLA's party committee system had been shaken, necessitating both sustained propaganda signaling as well as practical changes in behavior.

Role of the Party Committee

In the wake of the Gutian Conference, PLA propaganda has consistently attacked the idea (which has apparently become widespread) that commanders should focus solely on warfighting issues while political commissars focus on quality-of-life issues. This idea is described as a fundamental violation of “the party’s collective leadership organizational principle” (党的集体领导组织原则). Instead, PLA party committees must always use “the responsibility system for the division of labor under the collective leadership of the party committee” (党委统一的集体领导下的首长分工负责制), in which “all work is placed under the unified leadership of the party committee and all important questions are decided by the party committee” (做到一切工作都置于党委统一领导之下，一切重要问题都由党委研究决定).⁴⁴ Although concern for the health of the party committee system predates the Gutian Conference, 2014 saw the military propaganda system arguing forcefully that the command and leadership role of the party committee itself needed to be strengthened and respected. Many party committees were focused on rote or formulaic training without thinking about how it will be used in actual combat, while others were stuck in the past, continuing to prepare for mechanized rather than informatized warfare, and still others viewed their primary responsibility as overseeing the management of funds and property, rather than

44. “What is the difference?”

exercising operational leadership.⁴⁵ As one article put it, the main purpose of the party committee's work is effectively planning for and being able to achieve victory in battle, and that the first priority of party committees at all levels is leading troops in battle.⁴⁶

The 2014 Gutian Conference reestablished the requirement that the party's leading organs (党的领导机关) act as "the 'leadership hubs' of military work" (军事工作中的"领导的中枢").⁴⁷ In the words of a 2018 *PLA Daily* article, "party committee organs are the command backbone of units and have an important role in guiding the direction of unit building" (党委机关是部队的指挥中枢, 在部队建设中具有把方向、树导向的重要作用).⁴⁸ The committees must serve as guiding lights for all types of work and reform, combating the various "diseases" which inhibit effective unit building, including party committees that are too tentative or scared

45. "What is the difference?" The specific organizations to which the phrase "political and legal affairs departments and related functional departments" is referring is unclear, though it may mean the PLACs of the staff, political work, and other departments within the command organization.

46. Zhifeng, "Roles and responsibilities," 98.

47. Wu Zhengping, "少数人决定岂能代替党委集体决策—全面加强新时代我军党的领导和党的建设工作系列谈" [A few people decide that they can replace the collective decision-making of the party committee—A comprehensive discussion on strengthening the PLA's party leadership and party building work in the new era], 解放军报 [PLA daily], August 24, 2018.

48. For instance, a February 2004 *PLA Daily* article argues that the key elements of PLA political work in the midst of ongoing military reform are (a) ensuring that the party retains command of the army; and (b) preserving and strengthening the party committee system. "强化军魂意识 坚持党对军队绝对领导不动摇" [Strengthening consciousness of military spirit—Insisting that the party's absolute leadership over the army is unwavering], 解放军报 [PLA daily], February 4, 2004.

in organizing training activities, becoming overly focused on avoiding damage, accidents, or casualties, which leads to a lack of realism.⁴⁹ The emphasis on the party committee's operational command role is especially notable. Even as the speed and tempo of modern combat operations have made the collective decision-making system of the party committee increasingly difficult, PLA sources emphasize adherence to that system "is more important than anything else."⁵⁰ As the speed and tempo of operations have increased, so have the operations' degree of political importance and strategic impact. As combat operations extend their geographic reach and increase their potential destructiveness, command organs can no longer "blindly pursue purely military results" (盲目追求单纯军事效果) at the expense of larger political objectives. Commanders must be prepared to strike and then halt if that is what the broader geopolitical situation dictates, and party committees must exercise the higher-level political judgment necessary for appropriately guiding combat operations under such circumstances.⁵¹ In this way, the party seeks to assure itself the PLA's wartime actions will not exceed its mandate or directives, leading to undesired geopolitical consequences.

49. "二炮军官：军队党委不善于带兵打仗就没资格领军" [Second Artillery officer: A military party committee not good at leading troops in combat is not qualified to lead], 解放军报 [PLA daily], September 24, 2014.

50. "Second Artillery officer."

51. "党委要成为战斗力建设的领导中枢" [Party committees must become the leading center of combat effectiveness construction], 解放军报 [PLA daily], December 5, 2014.

Management of Political Cadres

The PLA has emphasized the importance of developing political cadres' military skills, requiring them to "become both specialized talents in political work and also experts in military work" by studying broader military affairs and science technology (including the equipment used by their units) while undertaking direct command functions in training.⁵² This training is part of the broader push to involve political cadres and political work organs in operational training so that their expected political warfare and other contributions are realistically performed and adequately practiced they can gain experience in making command and other operational decisions under trying conditions.⁵³ Thus, to increase its realism and give the political cadres involved operational experience, the PLA Air Force preeminent Red Sword-2018 (红剑-2018) exercise incorporated 19 types of wartime political work such as battlefield psychological protection, battlefield public opinion attack and defense, and prisoner of war management.⁵⁴

52. "突出关键点□从军以上党委机关做起严起" [Highlight critical points, standing up party committee organs at the corps level and above], 解放军报 [PLA daily], July 5, 2018.

53. "Highlight critical points."

54. A 2014 *PLA Daily* article published immediately prior to the Gutian Conference states that owing to the advent of informatized warfare, operational methods and means of command have undergone profound changes, while war's political nature has become even more distinct (政治性更加鲜明). At the same time, the global and strategic nature of war has increased, as have its tempo and intensity, all of which combine to increase the demands placed upon the party committee's ability to lead operations. "Second Artillery officer"; and Zhengping, "A few people decide."

Military sources also describe various other means to increase political cadres' operational command capacity: sending away for study and training (送学培训), switching of billets (军政换岗), and organ-grassroots interchangeable billets (机关基层交叉任职).⁵⁵ The latter two point toward what seems to be a major change in the nature of service as a political cadre, in that the PLA has mandated that they should regularly switch to non-political staff and command billets, especially at the grassroots level (meaning battalions and below). The practice was formally initiated in the wake of the Gutian Conference and applied to both company-level political and military cadres who had held their billets for at least two years and battalion commanders and commissars who had not previously held positions in the opposite career track.⁵⁶ Whether the program has been expanded to the whole PLA (or if it even still exists, for that matter), as the most recent explicit mentions of it in military publications date from early 2017, when *PLA Daily* articles described the post-switching program in the 31st and 27th Group Armies, respectively, is not clear. Both depict the practice as beneficial, but still undertaken only in specified cases, not universally.⁵⁷ Nonetheless, if it has been regularized, such a program would constitute

55. GPD Organization Department, “深入探究信息化作战政治工作作用机理” [Thoroughly explore the mechanisms of informatized political work], 解放军报 [PLA daily], November 13, 2015.

56. Zhang Lianguo, “Vigorously improve the level of construction.”

57. Wang Xingsheng, Han Jinqiang, and Qiao Xiang, “论重新树立我军政治工作威信问题” [On rebuilding the prestige of political work in the PLA], 中国军事科学 [China military science], January 17, 2016, 79–85.

a significant shift in the nature of political cadres, ensuring they possess substantive and comparatively recent operational command or staff experience. This shift would be in keeping with the 2015 CMC opinion on building the political work system issued in the wake of the Gutian Conference, which specifically mandates that at least 10 percent of the personnel in political departments in corps-level units and above consist of military cadres and special technical officers. Sources also make clear that unit party committees themselves (typically at the brigade level) are responsible for overseeing post-switching.⁵⁸

The PLA is also instituting political cadre personnel management practices designed to ensure their fitness for their positions and to combat client networks and corruption. For instance, a policy directive from the immediate post-Gutian period sets out a requirement for political cadres that, to be eligible for a given post as political commissar, a candidate must have experience serving as a political commissar at the two grades immediately below as well as working in the political organs of a unit or organization of the same grade as the prospective post.⁵⁹ This requirement ensures that a political commissar clearly understands the roles, functions, and requirements of his subordinates, both within the unit and within subordinate units. Likewise, the same document sets out requirements for transferring political cadres and commissars out of their present billets when they have been with their

58. Yao Chunming and Li Jianwen, “空军“红剑-2018”演习探索战时政治工作怎么做” [Air Force “Red Sword-2018” exercise exploring how to do political work in wartime], 解放军报 [PLA daily], June 6, 2018.

59. CMC, Opinions on building the ranks of political organs.

units too long. For instance, functional department leaders (业务部门领导) who have served in the same CMC-level organ for more than 30 years must be transferred to another unit, while for those at the TC level, the limit is 20 years, and at the corps level, 10 years. Remarkably, for cadres who are not leaders of their respective organizations, the limits are even tighter, working out to 15, 12, and 8 years respectively. By ensuring political cadres are moved regularly and cannot spend their entire careers in the same units, organs, or chains of command, the PLA can both provide them with a wider range of career experiences and help guard against entrenched interests at the top and clientelist networks.

Management of Education, Personnel Development, and Training

Beyond the issue of managing political cadres themselves, party committees are also responsible for overseeing the professional development of all personnel within the unit, including training, education, and other programs. Although this responsibility falls to party committees by virtue of their status as the core command organ of each unit, military propaganda has increasingly emphasized the importance of party committees directly handling personnel development. A *PLA Daily* article from December 2014 states that party committees bear “the political responsibility for [their units or organizations] being able to fight and win” (能打仗、打胜仗的政治责任), and are tasked with overseeing all aspects of training and ensuring that it is effective at increasing

operational capability and combat effectiveness.⁶⁰ These responsibilities include ensuring the right individuals are placed and retained in the right posts, as well as creating institutions and conditions which are conducive to achieving these goals.⁶¹ Even the warfighting-focused TC party committees are charged with “strictly controlling the education and management of high- and middle-level cadres of the theater organs and directly affiliated units” (严抓好战区机关和直属部队高中级干部教育治理).⁶²

As noted earlier, one of the major changes instituted as part of the 2016 reforms was transferring responsibility for enlisted personnel management to the new CMC PWD and unit-level PWDs. This transfer of responsibility may prove to be a mixed blessing. Although such a reform effectively concentrates responsibility for all aspects of personnel management (officer, enlisted, and civilian) within the political work system, it also increases the potential workload being placed upon political department’s party committees. This increase in workload is especially true as the PLA increasingly emphasizes employing civilian personnel in a wide range of support roles. Although PLA sources do not specifically describe these new responsibilities as overwhelming, some point to the considerable extra burden they place upon party committees, political departments, and political cadres as they try to handle

60. CMC, Opinions on building the ranks of political organs.

61. “党委要成为战斗力建设的领导中枢” [Party committees must become the leading center of combat effectiveness construction], 解放军报 [PLA daily], December 5, 2014.

62. “Party committees must become the leading center.”

enlisted selection and promotion with sensitivity and in a manner which does not undermine morale.⁶³

IMPLICATIONS

The most prominent implication of the PLA's political work system reform is that it has been focused on strengthening the party's control of the armed forces and revitalizing the role of political commissars and party committees in the command process. Aside from indicating a seeming lack of confidence in the PLA's reliability, these changes will have a serious impact on how the PLA operates. If the PLA is serious about reinforcing and revitalizing the role of the party committee in the operational command process, then we must consider how its collective decision-making process is to be reconciled with the need for rapid decision making in modern, informatized warfare. The PLA explicitly acknowledges the contradiction, but believes the nature of modern war is such that the party committee's role is only growing in importance. Ultimately, the most likely solution to the contradiction is a growing reliance upon computer-aided decision-making and command automation tools to speed up the operational command process as much as possible.

Another question is how precisely PLACs will interact with one another, with their parent party committees, and with the PWDs of their respective units. In relation to the first point, PLACs are intended

63. The Chinese phrase is referring to the organizations comprising the TC command structure (as opposed to separate subordinate units). “东部战区聚焦主战加快推进联合作战体系和能力建设纪事” [Chronicle of the Eastern TC focusing on warfighting and accelerating the construction of the joint operational system and capacity], Military—People's Daily Online, July 6, 2017, <http://military.people.com.cn>.

to be guided jointly by the PLACs of both the TCs and the services. Although those two categories of PLACs have distinct areas of functional responsibility, the way in which contradictions in guidance would be resolved is unclear. Likewise, whether PLACs below the CMC level can actually function as effective watchdogs on the actions of the party committees of which they are a part is unclear. In other words, will unit-level PLACs be largely toothless and obedient to their immediate superiors, or will they actively investigate and discipline them when necessary, thereby potentially endangering the good order of units? In addition, the way in which the PLACs' responsibility for undertaking political assessments as part of their security work will be squared with the PWDs' identical responsibility in relation to promotions, selection, and party membership is unclear. Will the number of political assessments simply be doubled, increasing the bureaucratic burden? Or will efforts and resources be shared between the two, undermining the intended division between PLACs and PWDs? Although the CMC-PLAC and subordinate PLACs represent a potentially powerful tool for enforcing the administrative and command system instituted as part of the 2016 reforms, their ability to do so effectively is less clear.

Will making the political work system responsible for all personnel management prove a boon or a burden? On the one hand, this change could enable more holistic management of the issue at each level of command. On the other hand, this change may overburden the political work system's management capacity (especially as higher-level political work organs have apparently been downsized), thereby affording even less individual attention and direct

management, potentially affecting retention of the high-quality personnel so essential to the PLA's development and modernization. Moreover, unless corruption in the promotion process is dealt with effectively, it may simply metastasize into the enlisted and civilian personnel management sectors that have already had less-prominent corruption problems of their own.

Finally, the distinction between military and political cadres may become increasingly blurred. In the years since the Gutian Conference, the PLA appears to have pursued a deliberate policy of requiring political cadres to occupy command and staff billets for extended periods so that all officers are well versed in both military and political duties. Although direct evidence for the practice primarily discusses the grassroots (that is, battalion and company) level, sources nonetheless indicate that the practice is a requirement for higher grades as well. These requirements may eventually lead to an officer corps in which the distinction between military and political cadres is based on current billets, and not permanent career tracks. Such a change would represent a return to the PLA's earliest roots, when Red Army cadres often served as both political commissars and commanders during their careers and there were no set career tracks. Of course, in a modern, technologically advanced military focused on conventional (as opposed to guerrilla) warfighting, such a system could hamper specialization and decrease the average command experience of each given officer. Although such an outcome remains only supposition at the moment, the emphasis on simultaneously strengthening both political work and military capacity nonetheless demonstrates a

determination to ensure the modern PLA will be just as “red” as it is expert; whether this ultimately undermines or retards the PLA’s ability to defend the Chinese communist party-state is a question only the future can answer.

**THE PLA AND THE PARTY:
STRUCTURAL CHANGES AT THE
BEGINNING OF THE XI ERA**

2. ROCKET FORCE PERSONNEL IN THE AGE OF XI JINPING

David C. Logan

China's missile forces have undergone significant change in recent years. China is the only nuclear weapons state recognized by the Nonproliferation Treaty that is increasing the size of its nuclear arsenal.¹ Aside from the moderate quantitative expansion of its arsenal, China has also focused on qualitatively improving its missile forces, developing more advanced solid-fueled, road-mobile missiles and equipping some with multiple independently targetable reentry vehicles (MIRVs).² Perhaps one of the biggest changes, though, has been the introduction and expansion of conventionally armed missile units which, at the time of the creation of the Rocket Force, may have accounted for 80 percent of all Rocket Force delivery vehicles.³ These changes to force size and composition have also been accompanied by organizational changes with the creation of the People's Liberation Army (PLA) Rocket Force

1. For a comprehensive look at changes to China's nuclear forces, see Eric Heginbotham et al., *China's Evolving Nuclear Deterrent: Major Drivers and Issues for the United States* (Santa Monica, CA: RAND Corporation, 2017).

2. Tong Zhao and David C. Logan, "What If China Develops MIRVs," *Bulletin of the Atomic Scientists*, March 24, 2015, <https://thebulletin.org/2015/03/what-if-china-develops-mirvs/>.

3. Jeffrey Lewis, "China's Belated Embrace of MIRVs," in *The Lure & Pitfalls of MIRVs: From the First to the Second Nuclear Age*, ed. Michael Krepon, Travis Wheeler, and Shane Mason (Washington, DC: Stimson Center, 2016), 105.

as the organization responsible for China's land-based missiles.⁴

Along with these changes to hardware and organization, the PLA's missile forces have also seen key adjustments to its personnel policies and practices. This chapter reviews recent policies, trends, and changes regarding PLA Rocket Force personnel. The analysis finds evidence that the Rocket Force has placed greater emphasis on recruiting both people with college educations and women (two goals which may be intertwined). Once they enter, these recruits undergo training which increasingly involves red-blue confrontations; these trainings, which are improving in realism, aim to improve the Rocket Force's ability to participate in joint operations. In areas of special importance to the Rocket Force—personnel reliability and operational security—the PLA has continued its historic focus on political suitability; but, recently, the PLA has also emphasized the need to train personnel in electronic security and to ensure that missile force troops have sound mental health. The promotion paths within and beyond the Rocket Force suggest that it may prioritize conventional over nuclear constituencies. Finally, beyond its own ranks, Rocket Force personnel have been promoted to key positions throughout the PLA and the Chinese defense bureaucracy, suggesting both that the Rocket Force may be gaining in prestige and power relative to the other services and that President Xi Jinping has used these promotions as a way to advance key allies and consolidate control over the military.

4. David C. Logan, "PLA Reforms and China's Nuclear Forces," *Joint Force Quarterly* 83 (4th Quarter, October 2016): 57–62.

Though the chapter focuses on changes within the PLA Rocket Force, several of these alterations reflect broader trends within the PLA, such as efforts to improve personnel quality and the ability of the force to conduct joint operations. This chapter includes some discussion of the history of China's missile forces, but it focuses on Rocket Force personnel policies and practices during the Xi Jinping era—especially on those changes associated with the recent transition from the Second Artillery Corps to the Rocket Force.

This chapter begins with a brief overview of the history of China's missile forces, tracing it briefly from the founding of the former Second Artillery Corps, through the introduction and growth of the country's conventional missile units to the recent creation of the Rocket Force. Next, the chapter examines recent personnel trends in China's missile forces, examining changes across recruitment and selection, training and education, personnel reliability, promotion, and career paths. Finally, the chapter closes by discussing potential implications of these findings for the Rocket Force, the PLA, and US-Chinese security relations.

CHINA'S EVOLVING MISSILE FORCES

The Second Artillery Corps, the predecessor to today's Rocket Force, was founded in 1966 and was given control of China's land-based missiles.⁵ Established just two years after the country's first nuclear test, the early Second Artillery Corps

5. For more on the history of China's missile forces and the associated nuclear program, see John Wilson Lewis and Xue Litai, *China Builds the Bomb* (Redwood City, CA: Stanford University Press, 1991); and Jeffrey Lewis, *Paper Tigers: China's Nuclear Posture* (New York: Routledge, 2014).

was equipped solely with nuclear-armed ballistic missiles, although the force would not deploy its first intercontinental ballistic missiles until the early 1980s. For decades, the Second Artillery Corps fielded a relatively small, unsophisticated force of liquid-fueled, stationary missiles.

The size and makeup of the Second Artillery Corps began to change in the early 1990s with the introduction of the first conventional missile units.⁶ These changes in force makeup were accompanied by technological advancements, including the development and deployment of more sophisticated solid-fueled and road-mobile missiles which, due to their enhanced mobility and concealment, enjoyed greater survivability. The ways in which the introduction of conventional missiles and the assignment of a conventional mission set may have changed the priorities of the Second Artillery Corps are not yet clear, though patterns of promotion within the force suggest that the Second Artillery Corps may have come to prioritize the conventional mission set over the nuclear one (as discussed later in this chapter).⁷

The most recent changes to China's missile forces came with the wave of military reforms announced

6. Michael S. Chase and Andrew S. Erickson, "The Conventional Missile Capabilities of China's Second Artillery Force: Cornerstone of Deterrence and Warfighting," *Asian Security* 8, no. 2 (2012): 115-37; and Ron Christman, "Conventional Missions for China's Second Artillery Corps," *Comparative Strategy* 30, no. 3 (2011): 198-228.

7. David C. Logan, "Career Paths in the PLA Rocket Force: What They Tell Us," *Asian Security* 15, no. 2 (2018).

at the end of 2015.⁸ As part of those reforms, the PLA established the Rocket Force as successor to the Second Artillery Corps.⁹ This new military organization is still charged with commanding China's conventional and nuclear-armed land-based missiles, but it features several differences from its predecessor.

First, the newly established Rocket Force enjoys the status of a full-fledged service, making it bureaucratically senior to the former Second Artillery Corps.¹⁰ This elevation in status for China's missile forces not only reflects the prestige and importance of these military units, but could also have implications for the future trajectory of the missile forces. For example, this higher status may bring greater autonomy, perhaps allowing the Rocket Force more freedom to set China's strategy governing

8. For more on these reforms, see Joel Wuthnow and Phillip C. Saunders, *Chinese Military Reforms in the Age of Xi Jinping: Drivers, Challenges, and Implications* (Washington, DC: Center for the Study of Chinese Military Affairs, 2017).

9. Michael S. Chase, "PLA Rocket Force Modernization and China's Military Reforms" (testimony before the US-China Economic and Security Review Commission, Washington, DC, February 15, 2018).

10. For more on the newly formed Rocket Force and its implications for China's missile forces and the PLA at-large, see David C. Logan, "PLA Reforms and China's Nuclear Forces," *Joint Force Quarterly* 83 (4th Quarter, October 2016): 57-62; and David C. Logan, "Making Sense of China's Missile Forces," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phillip C. Saunders and Joel Wuthnow (unpublished book), Microsoft Word file.

its land-based missiles.¹¹ The extent to which the Rocket Force has a stronger hand in setting nuclear policies may depend on broader trends in Chinese civil-military relations. Historically, China's political leadership has exercised strong control of its nuclear strategy and policies and it's not yet clear that has changed.¹² Greater organizational prestige may aid the Rocket Force in battles with other military services over control of key strategic capabilities, such as the country's direct ascent anti-satellite weapons or the nascent nuclear-powered ballistic-missile submarine force.¹³

Second, the creation of the Rocket Force has been followed by an internal reorganization and expansion. The missile units of the former Second Artillery Corps were organized under six bases, which were assigned

11. For some recent evidence regarding civil-military relations and that the degree of military autonomy varies according to both organization and issue area, see Sofia K. Ledberg, "Analysing Chinese Civil-Military Relations: A Bottom-up Approach," *China Quarterly* 234 (2018): 377-98; and Sofia K. Ledberg, "Political Control and Military Autonomy: Reexamining the Chinese People's Liberation Army," *Asian Security* 14, no. 2 (2018): 212-28.

12. M. Taylor Fravel, *Active Defense: China's Military Strategy Since 1949* (Princeton, NJ: Princeton University Press, 2019): 236-69.

13. For an example of how some of these dynamics might influence the command and control arrangements of China's nuclear-powered ballistic-missile submarine force, see David C. Logan, *China's Future SSBN Command and Control Structure* (Washington, DC: Institute for National Strategic Studies, November 2016).

an identification number from 51 to 56.¹⁴ Under the newly formed Rocket Force, those bases have been renumbered from 61 to 66 and some launch brigades were reassigned to different missile bases. The Rocket Force also appears to have established new missile units. Open-source research published prior to the recent wave of military reforms identified up to 28 or 32 launch brigades within the former Second Artillery Corps.¹⁵ More recent assessments published since the reforms have identified as many as 39 brigades.¹⁶ The missile systems that have been assigned to these new brigades have not yet all been identified.

Third, the conventional units of the Rocket Force may be more integrated with units of other services and of the newly created theater commands (TCs). The recent wave of military reforms aimed at improving the PLA's ability to conduct joint operations and recent reports on Rocket Force training and organization include language suggesting greater integration

14. For more on the former Second Artillery Corps' base organization, see Mark Stokes, *China's Nuclear Warhead Storage and Handling System* (Arlington, VA: Project 2049 Institute, March 12, 2010).

15. Jeffrey Lewis, *Paper Tigers: China's Nuclear Posture* (New York: Routledge, 2014), 116; and Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Posture and US-China Strategic Stability," *International Security* 40, no. 2 (Fall 2015): 43.

16. Mark Stokes, *PLA Rocket Force Leadership and Unit Reference* (Arlington, VA: Project 2049 Institute, April 9, 2018); and Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018* (Washington, DC: Department of Defense, May 16, 2018), 125.

with the TCs in pursuit of enhanced “jointness.”¹⁷ For example, a recent article in *Rocket Force News*, in emphasizing the importance of future joint operations, also reported that a Rocket Force “base has joined the joint operations chain of command,” suggesting a heightened level of integration.¹⁸ Public reporting has highlighted the efforts of a Rocket Force missile base to better integrate with its relevant TC, with the base commander saying that “when we cross the threshold into the theater command, we are like one family.”¹⁹

These organizational and armament changes have several potential implications for the personnel of China’s missile forces. First, growth in China’s missile units means that, despite overall personnel cuts across the PLA, the Rocket Force is likely to require more personnel. Second, the incorporation of more sophisticated systems may require better educated and trained personnel. Third, integration of Rocket Force units with other PLA forces will require improved personnel education and training in joint operations.

RECRUITMENT AND SELECTION: FOR THE ROCKET FORCE, IS THE FUTURE FEMALE?

The size and composition of China’s missile forces have changed considerably over the last two decades.

17. For more extensive primary-source evidence, see David C. Logan, “Making Sense.”

18. “某基地首次集群指挥锤炼 “制胜铁拳” [A certain base for the first time undertakes cluster command “winning iron fist”], 火箭军报 [Rocket Force news], November 25, 2017, 1.

19. Wang Weidong and Song Haijun, “潜心砺剑, 战略铁拳越练越硬” [Concentrate on sharpening the sword, the more the strategic iron fist is used, the harder it becomes], 解放军报 [PLA daily], February 6, 2018, http://www.81.cn/jfbmap/content/2018-02/06/content_198862.htm.

With these changes to force structure have come changes to personnel. This section reviews recruitment and selection policies and practices of the Rocket Force and examines two recent changes. The section begins by presenting data from academic studies on Rocket Force personnel which may provide a view into overall demographics of the force. The section ends by examining the Rocket Force's efforts to recruit more college students and more women into its ranks.

Complete demographics of the Rocket Force are not publicly available, but they might be inferred from the many open-source clinical studies conducted using Rocket Force personnel. In recent years, researchers at military-affiliated institutions have studied the ranks of the missile forces across a range of health indicators, including psychological well-being, nutritional intake, and post-injury rehabilitation. At least eight such studies reporting demographics of Rocket Force subjects have been published since 2014. In selecting their sample populations, these studies typically adopt some form of random sampling technique to maximize the external validity of their findings (one might assume the demographics of these samples generally reflect the demographics of the force at-large, or at least the sampled unit). More than 9,000 subjects participated in these eight studies. More than 97 percent of the subjects studied were men (see figure 2-1), and the average age was 23.7 years.²⁰ But in one recent large-scale study of mental health in the PLA which included more than 1,300 Rocket Force troops, 14 percent of Rocket Force respondents

20. Feng Zhengzhi et al., “我国军人症状自评量表2016版常模的建立” [Establishment of norm of symptom checklist 90 (2016 edition) for Chinese military personnel], 第三军医大学学报 [Journal of Third Military Medical University] 38, no. 20 (2016).

were female. As shown in figure 2-2, across all studies examined which reported demographic data, roughly 16 percent had at least a bachelor's degree, 20 percent had a degree from a technical college, 51 percent had a high school diploma, and 13 percent had finished a lower schooling. Within the samples, as shown in figure 2-3, roughly 10 percent were officers (cadres) (干部), 50 percent were noncommissioned officers, and 40 percent were enlisted.

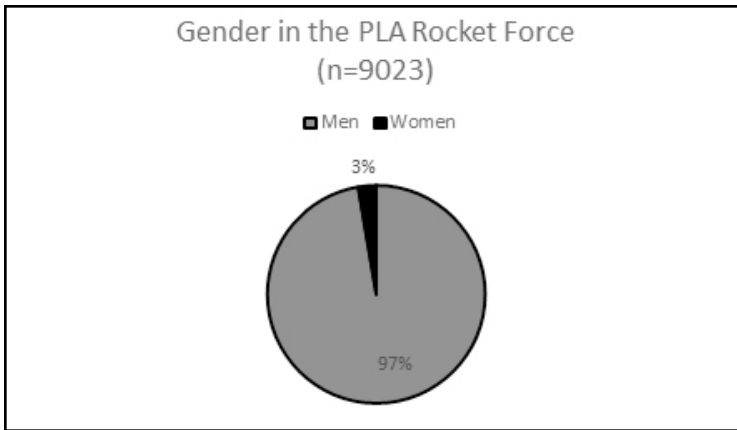


Figure 2-1. The aggregate gender distribution of Rocket Force soldiers across eight studies of mental and physical health within the PLA Rocket Force

Roughly 97 percent of soldiers across the studies were male.

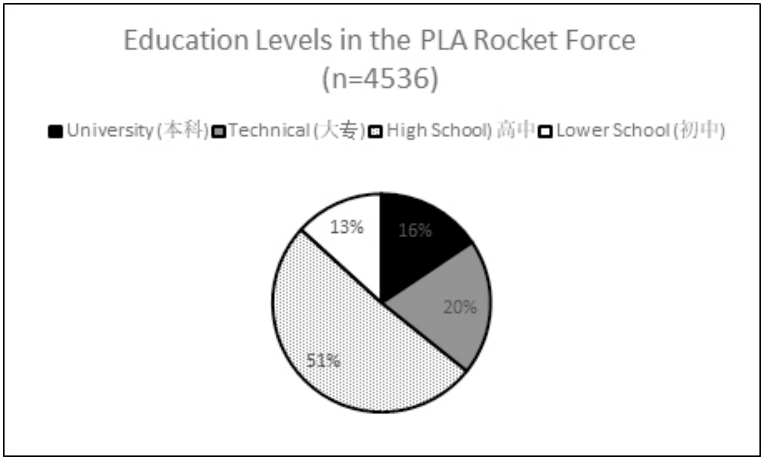


Figure 2-2. The aggregate distribution of education levels of Rocket Force soldiers across multiple studies of mental and physical health within the PLA Rocket Force

More than half of subjects had a high-school degree or lower. In recent years, the Rocket Force has emphasized efforts to attract more highly educated recruits.

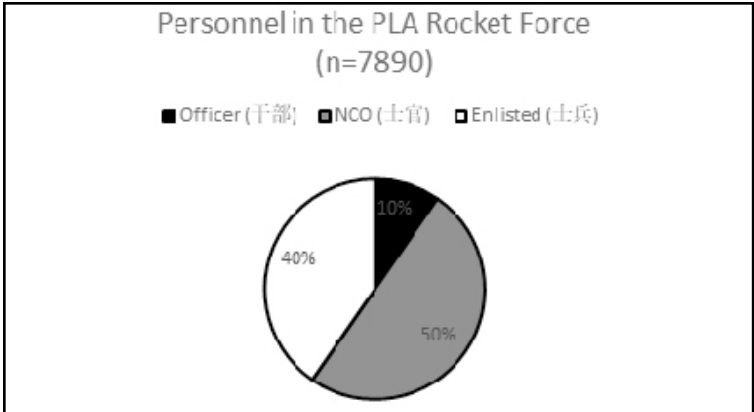


Figure 2-3. The aggregate distribution of personnel classification of Rocket Force soldiers across multiple studies of mental and physical health within the PLA Rocket Force

The Rocket Force appears to have established two recruitment goals in recent years: to target higher-quality recruits, especially those with university educations; and to increase the number of women in the force. These two goals may be intertwined.

Rocket Force recruiting efforts have focused on attracting college students and graduates to the ranks.²¹ The Rocket Force has dispatched representatives to colleges and universities around the country, but especially in Beijing, where many of the country's most prestigious schools are located.²² At these recruiting events, the Rocket Force has trotted out celebrity soldiers, such as Chen Yu, a straight-A student at selective Tsinghua University who, halfway through his college career, postponed his studies to enlist in the Rocket Force for two years.²³ As part of its outreach to university students, the Rocket Force "has established with local schools a new recruit training and acquisition cooperative mechanism and implemented a 'made-to-order' way of targeted recruiting."²⁴ Prestigious Peking University has established a special scholarship for students who work in the military and has enacted policies that

21. For more on the PLA's educational initiatives, see Brian Waidelich and Bernard D. Cole, "The People's Liberation Army in 2018: Education and People's War," in this volume.

22. Zhang Xuanjie and Li Bingfeng, "火箭军征兵宣传走进首都高校" [Rocket Force recruitment propaganda enters higher education], *新华* [Xinhua], June 7, 2016, http://www.xinhuanet.com/mil/2016-06/07/c_1119007311.htm.

23. Zhao Xinying, "'Student Soldiers' Swap University for Uniforms," *China Daily*, July 27, 2017, http://www.chinadaily.com.cn/china/2017-07/27/content_30262932.htm.

24. Zhang Xuanjie and Li Bingfeng, "Rocket Force recruitment propaganda."

would exempt students who served in the PLA from certain requirements for graduate study.²⁵ College students also receive preference throughout the PLA selection process, including on physical examinations and political investigations.²⁶ In 2015, 15 students from Peking University enlisted in the Rocket Force.²⁷

Rocket Force efforts to recruit more highly educated personnel have paralleled similar efforts across the PLA, though the Rocket Force appears to be emphasizing education more strongly given the service's focus on advanced technology.²⁸ Rocket Force officials explicitly tie their recruitment goals to efforts to prepare the force for the more complex requirements of the kinds of conflicts the PLA expects to fight in the future. Chen Yu, the Tsinghua graduate and Rocket Force soldier, told the assembled students of a university recruiting event that "an informatized military calls for scientific and technological talent, and even more requires you to contribute

25. Xu Jingjing and Xu Wen, "大国长剑 欢迎你来" [Great power's sword invites you to come along], 解放军报 [PLA daily], June 8, 2016, http://www.81.cn/gfbmap/content/2016-06/08/content_146926.htm.

26. Yuan Guorui and Yang Yonggang, "火箭军征兵宣传进北大" [The Rocket Force's recruitment propaganda enters Peking University], 中新网 [China news service], June 12, 2016, http://www.81.cn/zbrw/2016-06/12/content_7096474_6.htm. For more on some recent changes aimed at recruiting more college students generally, see Wang Shumei, *The PLA and Student Recruits: Reforming China's Conscription System* (Stockholm, Sweden: Institute for Security & Development Policy, January 2015).

27. Xu Jingjing and Xu Wen, "Great power's sword."

28. For more on changes in the PLA's military education system and practices, see Ken Allen and Brendan Mulvaney, "Changes in the PLA's Military Education," in this volume.

to the dream of a strong military.”²⁹ Similarly, the vice director of the Rocket Force Political Work Department has directly attributed the need for high-quality recruits to the need to fight informatized conflicts.³⁰ Attracting more highly educated recruits has been somewhat successful, though detailed data is hard to obtain. Reports indicate an increase in the number of college degree holders among recruits and Rocket Force representatives have claimed that “the Rocket Force has vigorously implemented its talent development project and achieved good results.”³¹ But despite this progress, some Rocket Force officials still regularly complain of problems in recruiting qualified individuals (as discussed below). In fact, the PLA canceled its national defense student program, reportedly due to failures to attract qualified recruits and the inability of reserve officers recruited through the program to integrate into the PLA.³² The ways in which the program’s cancellation might affect Rocket Force-specific recruitment efforts are not yet clear.

29. For more on China’s evolving military strategy, see M. Taylor Fravel, “Shifts in Warfare and Party Unity: Explaining China’s Changes in Military Strategy,” *International Security* 42, no. 3 (Winter 2017/2018): 37–83.

30. Xu Jingjing and Xu Wen, “Great power’s sword.”

31. Anthony H. Cordesman, *The PLA Rocket Force: Evolving Beyond the Second Artillery Corps (SAC) and Nuclear Dimension* (Washington, DC: Center for Strategic and International Studies, October 13, 2016), 54; and Liu Jianwei, “来自火箭军的人大代表畅谈履行强军兴军使命担当” [NPC representatives from the Rocket Force discuss fulfilling the mission of strengthening the military], *解放军报* [PLA daily], March 16, 2018, http://www.mod.gov.cn/power/2018-03/16/content_4806933.htm.

32. Ying Yu Lin, “One Step Forward, One Step Back for PLA Military Education,” *China Brief* 18, no. 7 (April 2018).

Attempts by the Rocket Force to advance women in its ranks have been apparent. In recent years, the Rocket Force has deployed the organization's first female soldiers to the country's university recruiting fairs in an attempt to encourage more female college graduates to enlist.³³ Recruitment videos of the new Rocket Force feature images of women soldiers throughout.³⁴ One video, in trumpeting the past accomplishments of the missile forces, highlights Wang Xiaoli, one of the first female missile launch controllers, right alongside other missile force milestones such as the introduction of the first intercontinental ballistic-missile unit and luminaries such as Yang Yegong, a celebrated former Second Artillery Corps commander who oversaw the incorporation of some of the force's earliest conventional-missile units.³⁵ The PLA has extensively publicized the Rocket Force's first all-women missile launch control team and its members, emphasizing

33. Xu Jingjing and Xu Wen, "Great power's sword."

34. Gai Shuhai and Lei Wu, "火箭军首部征兵宣传片震撼发布" [The shocking release of the Rocket Force's first recruitment video], 81.cn, July 28, 2016, http://www.81.cn/depb/2016-07/28/content_7179248.htm.

35. For the video, see Gai Shuhai and Lei Wu, "The shocking release." For more on Yang Yegong, see Jeffrey Lewis, "Yang Yegong," Arms Control Wonk, August 17, 2005, <https://www.armscontrolwonk.com/archive/200728/yang-yegong/>.

their ability to perform successfully alongside their male peers.³⁶

Despite this recruiting emphasis, whether women are being provided the same professional opportunities and treatment as their male colleagues and whether they are being treated as tokens to burnish the PLA's image are not yet clear. Nevertheless, female Rocket Force soldiers have taken on substantive roles.³⁷ China's missile forces have established at least two all-female missile launch companies, one each in 2011 and 2012, the first of which was later incorporated as the Rocket Force's first female combat unit in 2014.³⁸ These units have trained extensively on various missile systems and, in 2015, participated in their first live-fire

36. “第一支女子导弹发射连：共和国战略导弹部队的新生力量” [The first female missile launch company: The new force of the republic's Strategic Missile unit], 新华 [Xinhua], August 2, 2017, http://www.xinhuanet.com/politics/2017-08/02/c_1121419742.htm; Cao Wenxi, “第一代女子导弹发射号手, 6年等待只为将导弹送上蓝天” [The first generation of female missile launch controllers, 6-year wait just to launch missiles into the blue sky], 解放军报 [PLA daily], November 24, 2015, http://www.81.cn/jfjbmap/content/2015-11/24/content_130176.htm; and Song Haijun, “导弹女兵焦亚汝” [Missile soldier Jiao Yazhen], 解放军报 [PLA daily], March 27, 2018, http://www.81.cn/jfjbmap/content/2018-03/27/content_202525.htm.

37. Hillary Brenhouse, “China's Female Astronauts: Must Be a Married Mom,” *Time*, March 25, 2010, <http://content.time.com/time/world/article/0,8599,1974793,00.html>.

38. Elsa Kania and Kenneth Allen, “Holding up Half the Sky? (Part 2)—The Evolution of Women's Roles in the PLA,” *China Brief* 16, no. 16 (2016).

exercises.³⁹ Women's representation increased at the highest levels of the missile forces when, in 2015, Li Xianyu became the force's first female general.⁴⁰

Evidence of efforts to increase the number of women in the Rocket Force may be related to the efforts to increase the overall quality of military personnel. In recent years, the PLA has reportedly faced difficulties with the low quality of people applying for military service. In 2013, roughly 60 percent of college students applying for military service failed their physical fitness exam, often due to poor eyesight or exceeding weight restrictions.⁴¹ Rocket Force officials in particular, despite recent recruiting efforts, continue to complain of a talent shortage, and Xi Jinping has expressed concerns about

39. "China's Female Missile Launchers, Winning Battles and Hearts," *Xinhua*, August 26, 2016, <http://en.people.cn/n3/2016/0826/c90786-9106173.html>; and CCTV Video News Agency, *PLA Women's Missile Company Joins Live-Fire Drill on China's NW Plateau* (Beijing: CCTV Video News Agency, 2015), YouTube video, <https://www.youtube.com/watch?v=5TkayfXci0Q>.

40. "火箭军首位女将, 当选全国政协委员" [Rocket Force's first female general selected as member of the National Political Consultative Conference], *观察者* [Observer], June 3, 2018, https://www.guancha.cn/military-affairs/2018_03_06_449161.shtml.

41. Zheng Xin, "Students Fail Army Fitness Standards," *China Daily*, August 13, 2013, http://usa.chinadaily.com.cn/china/2013-08/13/content_16889014.htm.

the low quality of PLA troops.⁴² The PLA has taken to revising many of its standards for new recruits, relaxing height and weight restrictions, permitting tattoos, and allowing recruits with certain mental illnesses (e.g., schizophrenia, dissociative disorder, depression, and bipolar disorder).⁴³ The Rocket Force may have decided that actively recruiting women is the best way to ensure a high-quality force, especially given the expected demands of future warfare and the decline in quality of recruits. Women make up an increasingly large proportion of college students in China and typically must score even higher on entrance exams than their male counterparts.⁴⁴ In 2016, more than half of the country's undergraduate and postgraduate students were women.⁴⁵ In fact, PLA representatives have emphasized the high education levels of its female fighters. In a television interview, one Rocket Force official advised, "Our female warriors, don't think they're uncivilized girls

42. Lei Xingfeng and Chen Kaijiang, "火箭军某训练区：不等不靠解决“人才荒” [Certain Rocket Force training area: Don't wait to resolve talent shortage], *解放军报* [PLA daily], May 3, 2018, http://www.mod.gov.cn/power/2018-05/03/content_4812296.htm. For some examples, especially in the context of developing joint operations capabilities, see, in this volume, Kevin McCauley, "Cultivating Joint Operations Talent."

43. Zhao Lei and Cang Wei, "PLA Eases Standards for Recruitment," *China Daily*, June 17, 2014, https://www.chinadailyasia.com/news/2014-06/17/content_15141714.html.

44. Didi Kirsten Tatlow, "Women in China Face Rising University Entry Barriers," *New York Times*, October 7, 2012, <https://www.nytimes.com/2012/10/08/world/asia/08iht-educlde08.html>.

45. Meng Jie, "Women Dominate Higher Education in China," *Xinhua*, October 27, 2017, http://www.xinhuanet.com/english/2017-10/27/c_136710572.htm.

who only graduated from middle school. The vast majority are college students.”⁴⁶ Similarly, a female Rocket Force recruiter told journalists that within an all-female missile launch company, 90 percent of the soldiers are college students, a common refrain in discussions of the all-female units.⁴⁷

Given broader demographic trends, the PLA may have more difficulty fulfilling its future recruitment goals of attracting more highly educated people. Some recent reporting has highlighted soldiers who have reenlisted or opted for a second commission (二次入伍 or 二次服役), perhaps in an attempt to bolster recruitment.⁴⁸ In addition, the Rocket Force’s personnel challenges are intensified by the fact that a large share of its troops are two-year conscripts, building in regular turnover within the ranks. These trends could exacerbate the PLA’s talent management challenges, increasing competition for high-quality personnel both between the PLA and civilian society and among the various military services.

46. CCTV Video News Agency, 观众提问王锡民: “东风第一旅”的战士中有女兵吗? [The audience asks Wang Ximin: Are there female soldiers among the fighters of the First DF Brigade?] (Beijing: CCTV Video News Agency, August 19, 2017), Adobe Flash video, <http://tv.cctv.com/2017/08/19/VIDEYePw05i07Z8bvUOaciya170819.shtml>.

47. Xu Jingjing and Xu Wen, “Great power’s sword.”

48. Zhu Wei, “再入军营, 为梦想而战” [Reentering the barracks, fighting for a dream], 解放军报 [PLA daily], October 9, 2018, http://www.81.cn/jfjbmap/content/2018-10/09/content_217244.htm; and Song Zelong, “The Second Time He Enlisted, It Was a Military Medal Brought with Him,” China Military, November 13, 2017, http://www.81.cn/bzzj/2017-11/13/content_7822758.htm.

TRAINING AND EDUCATION: ENHANCING COMPLEXITY, REALISM, AND JOINTNESS

The Rocket Force's focus on higher education and personnel training does not end with recruitment; it appears to also be connected to promotion within the ranks. In addition to the emphasis on higher education, the Rocket Force has also made efforts to strengthen its training programs by promoting the use of red-blue team confrontation exercises, enhancing the realism of its training, and emphasizing the ability to conduct joint operations.

Three educational institutes are subordinate to the Rocket Force: the Rocket Force Command College in Wuhan (火箭军指挥学院), the Rocket Force University of Engineering in Xi'an (火箭军工程大学), and the Rocket Force Noncommissioned Officer School in Qingzhou (火箭军士官学校). Limited enrollment data attests to the growth of the Rocket Force in recent years. In 2018, the Rocket Force University of Engineering publicly advertised just under 500 spots for new students. Though this number is somewhat lower than the 10-year high of 595 spots in 2015, it still represents a significant increase from a decade earlier, when the 2008 student enrollment plan called for just 208 spots. As with both recruitment and promotion, political traits are a key selection criterion in the admissions process. The first requirement listed for applicants to the Rocket Force Command College is a "firm political position," preceding references to physical fitness standards, mental health, and academic credentials.⁴⁹

49. "火箭军指挥学院 2018年硕士研究生招生简章" [Rocket Force Command College's 2018 master's student admission guide], 中国军网 [China military online], November 13, 2017, http://www.81.cn/jwzl/2017-11/13/content_7828394.htm.

Publicity for the Rocket Force Engineering University trumpets the many amenities and training facilities on the campus, including a swimming pool, dojo, track and field complex, light weapons shooting range, and missile training grounds. The campus reportedly houses “54 laboratories, 1 national-level experimental teaching demonstration center, 1 national-level virtual simulation experiment teaching center, 5 key military laboratories, 6 provincial-level teaching demonstration centers, and 1 provincial-level virtual simulation experiment teaching center.”⁵⁰ The university also reportedly possesses equipment for each missile system employed by the Rocket Force. The education centers associated with China’s missile forces have long been at the forefront of providing experiential education through these facilities.⁵¹ The Second Artillery Command College, which had been described as a model institution for the use of technology in professional military education, incorporated elements of virtual technology into training programs earlier than other institutions did.⁵² These efforts come alongside broader initiatives

50. “火箭军工程大学欢迎你！ 报考指南请查收” [Rocket Force Engineering University welcomes you! Please consult the application guide], 中国军网 [China military online], June 7, 2017, http://www.81.cn/depb/2017-06/07/content_7632109_2.htm.

51. For more on the use of simulations and battle labs in PLA training and education, see McCauley, “Cultivating Joint Operations Talent,” in this volume.

52. James Mulvenon, “‘True Is False, False Is True, Virtual Is Reality, Reality Is Virtual’: Technology and Simulation in the Chinese Military Training Revolution,” ed. Roy Kamphausen, Andrew Scobell, and Travis Tanner, *The “People” in the PLA: Recruitment, Training, and Education in China’s Military* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2008), 68–69.

within the PLA to strengthen and reform its military education, including the establishment of eight new military-affiliated academies for high school graduates and an effort within the curriculum to reduce the focus on traditional combat forces and establish a new “focus on early-warning, command and control and combat data.”⁵³

Within the realm of education, the Rocket Force appears to be emphasizing missile technology and creating slightly more space for female soldiers. Each year, China’s military academies prepare detailed student enrollment plans establishing the number of applicants who will be accepted that year within each field of study. In the 2011 plan for the former Second Artillery Corps, the three largest allocations were given to Weapon Systems and Launch Engineering (20 percent), Measurement and Control Engineering (17 percent), and Command Automation Engineering (10 percent). In 2018, the three largest allocations went to Weapons Launch Engineering (30 percent), Measurement and Control Engineering (22 percent), and Communication Engineering (9 percent). Some fields of study, such as those relating to automation, appear to have been eliminated or scaled back.

Over the same time period, a slight increase has occurred in the number of spots reserved for female students, jumping from just over 1 percent of all spots in the 2011 plan to more than 4 percent in the 2018 plan, the highest proportion ever. In addition, these reserved spots have changed from non-command to command spots. In 2011, none of the spots reserved for female students were command spots; all were

53. Yao Jianing, “PLA Schools to Expand Recruitment, Help China Win Information War,” *Global Times*, June 12, 2017.

non-command, technical ones. In 2018, all the spots reserved for female students were designated as command positions. Despite reforms to promote women within the missile forces, restrictions still impede the advancement of female soldiers. For example, the 2018 recruitment notice of the Rocket Force Command College notes “campaign studies [战役学], arms tactics [兵种战术学], combat command studies [作战指挥学], and military management studies [军队管理学] only enroll male students.”⁵⁴

The Rocket Force’s emphasis on higher education extends beyond recruitment and selection, as studying at one of the force’s higher education institutions appears to be nearly a requirement for promotion within the force. Within the PLA Rocket Force, 93 percent of brigade commanders, 75 percent of chiefs of staff, and 90 percent of chief engineers have been educated at the PLA Rocket Force University of Engineering.⁵⁵

With regard to training, the Rocket Force has focused on three aims: increasing and improving red-blue exercises (where, in this chapter’s reference, the red team is the home team), improving the realism of training, and enhancing the force’s ability to conduct joint operations. First, the Rocket Force has expanded the use of red team exercises in its training

54. “2018 master’s student admission guide.”

55. Second Artillery Engineering University, *Chinese Second Artillery University Promos* (Xi’an, China: Second Artillery Engineering University, n.d.), YouTube video, <https://www.youtube.com/watch?v=tOppK05J1Xk>.

activities.⁵⁶ News accounts of Rocket Force red-blue exercises have become somewhat regular, suggesting they are becoming an increasing component of the force's training regimen.⁵⁷ One indication of this trend comes from *PLA Daily* reporting on red-blue efforts with China's missile forces, which has significantly increased in the Rocket Force era. In the 24 months before the establishment of the Rocket Force, the *PLA Daily* included seven articles describing Second Artillery red-blue exercises. In the 24 months since the Rocket Force's establishment, the *PLA Daily* has run 58 such articles (see figure 2-4).

56. Wei Zhigang, "火箭军着眼未来战争组织红蓝对抗训练理论集训" [Rocket Force turns eye toward future war, organizes red-blue opposition training], 火箭兵报 [Rocket Force news], April 29, 2016.

57. "火箭军某导弹旅红蓝双方角色互换练攻防" [A Rocket Force brigade's red-blue dual role exercises, switching between offense and defense], 新华网 [Xinhua], June 4, 2018, http://www.xinhuanet.com/mil/2018-06/04/c_129886372.htm; "火箭军“天剑”系列演训 提升战略打击能力" [Rocket Force's "Sky Sword" series of exercises increases strategic strike ability], 中国新闻网 [China news], June 23, 2018, <http://www.chinanews.com/mil/2018/06-23/8545007.shtml>; and Liu Zunqi and Yang Yonggang, "战略导弹部队信息化蓝军显威红蓝对抗演兵场" [Strategic Missile Force's informatized blue army], Ministry of National Defense of the People's Republic of China, January 12, 2017, http://www.mod.gov.cn/power/2017-01/12/content_4769782.htm.

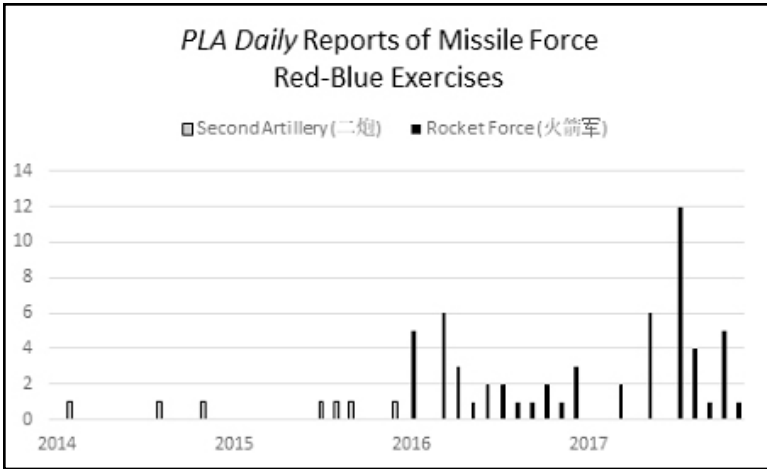


Figure 2-4. Number of *PLA Daily* articles each month mentioning red-blue exercises involving China’s missile forces in the 24 months preceding (gray bars) and following (black bars) the establishment of the Rocket Force

Reporting on red-blue exercises under the Rocket Force increased noticeably in comparison to that under the Second Artillery Corps.

In addition to increasing the frequency of red-blue exercises, the Rocket Force has attempted to increase their rigor and realism. In the past, the exercises suffered from several shortcomings. Rocket Force red-blue exercises were occasionally rigged so that the red team would always win, sometimes with exercise supervisors even providing valuable intelligence about the opposition blue force.⁵⁸ In the past, participants in red-blue exercises were reportedly overly fixated on the exercise’s outcome or on the pursuit of individual

58. David C. Logan, “The Evolution of the PLA’s Red-Blue Exercises,” *China Brief* 17, no. 4 (2017).

success, rather than viewing the exercise as an opportunity to learn and improve across the force.⁵⁹

The Rocket Force has reportedly tried to move away from overly scripted exercises to more realistic ones in which commanders are allowed to fail. As one report just before the 2015–16 wave of military reforms noted, troops were being encouraged to “emphasize testing, not comparison; emphasize substantive effect, not form; and emphasize review, not winning or losing.”⁶⁰ The outcomes of some recent exercises suggest the Rocket Force has taken these orders to heart. For example, a series of articles from 2017 in *Rocket Force News* covering recent training improvements noted in a string of red-blue exercises conducted that year, the red force had a record of five losses and two wins.⁶¹ The number of losses alone suggests that, though the Rocket Force may be struggling to perform in these exercises, it has taken seriously the goal of improving their realism. The Rocket Force has also undertaken efforts to standardize assessment criteria for the exercises so that all units train under similar conditions.⁶²

59. Liang Pengfei and Zou Fei, “砥砺胜战之刀开拓胜战之路” [The blade tempered by victory opens up the path to victory], 解放军报 [PLA daily], March 13, 2016, http://www.81.cn/jfjbmap/content/2016-03/13/content_137561.htm.

60. “连续十场军演释放出什么信号” [What signals are released by the ten consecutive field exercises], 中国青年报 [China Youth daily], July 25, 2014.

61. David C. Logan, “The Evolution of the PLA’s Red-Blue Exercises,” *China Brief* 17, no. 4 (March 2017).

62. Cai Ruijin, Tian Liang, and Zhang Hongliang, “火箭军某旅开展冬季红蓝对抗演练闻思录” [Certain Rocket Force brigade launches winter red-blue confrontation exercises], China Military Online, January 28, 2016, http://jz.chinamil.com.cn/n2014/tp/content_6872128.htm (site discontinued).

These efforts to increase the frequency and quality of red-blue exercises are being led by Diao Guangming, a professor at the Rocket Force Command College with extensive experience implementing and studying red-blue exercises. Diao has emphasized the importance of realism in Rocket Force exercises, saying, “Those whose peacetime training is overly nice will suffer greatly when they take the battlefield.”⁶³ Diao was recently recognized as one of the Rocket Force’s “ten great Pathbreakers” for his efforts.⁶⁴

Second, along with the increased use of red team exercises, the Rocket Force has taken other steps to improve the realism of its training. Xi has emphasized the need for realistic training since early in his tenure, and the Rocket Force has responded accordingly, with Rocket Force officials reporting that “realistic combat training . . . has already become normal.”⁶⁵ A major *Rocket Force News* article, published within a year after Xi’s ascension to chairman of the Central Military Commission, exhorted the PLA to look to the United States and Russia as examples of how to

63. Han Lei, Cao Fan, and Xiao Pan, “刁光明：变脸”只为打胜仗” [Diao Guangming: Changing face is the only way to win], 解放军报 [PLA daily], April 17, 2016, http://www.81.cn/jfjbmap/content/2016-04/17/content_141844.htm.

64. “军中排头兵！火箭军“砺剑尖兵”又迎10位新成员” [The military’s vanguard! The Rocket Force “sword-sharpening vanguard” welcomes 10 new members], 新闻中心 [Sina], December 29, 2017, <http://news.sina.com.cn/o/2017-12-29/doc-ifyqchnr7069068.shtml>.

65. Lu Xiaolin, Cai Ruijin, and Li Yongfei, “火箭军按照随时能战准时发射有效毁伤标准练兵备战” [Rocket Force preparing and training according to the standard of being able to launch effective damage on time any time], 中视网 [CCTV], December 17, 2017, <http://military.cctv.com/2017/12/17/ARTI5aGsliegUI8kSbBz5crH171217.shtml>.

conduct realistic training. The article noted that “in conducting actual combat conditioning training . . . it is necessary to focus on the future battlefield . . . conduct confrontation with a powerful enemy, and stick close to actual combat in inspecting and examining training concepts, training methods and actual combat capabilities.”⁶⁶ Units under the newly formed PLA Rocket Force have participated in a number of training drills with emphasis on operating in adverse weather and geographic conditions and combating enemy countermeasures. Since the creation of the PLA Rocket Force, a number of news reports have highlighted night drills for the units, while others have focused on adverse weather conditions, especially on extreme temperatures as low as negative 16 degrees Celsius.⁶⁷ One account described a drill requiring units to navigate difficult terrain and protect themselves against the enemy’s harassing strikes, electromagnetic interference, and high-altitude reconnaissance, among

66. Andrew S. Erickson and Michael S. Chase, “China’s Strategic Rocket Force: Upgrading Hardware and Software (Part 2 of 2),” *China Brief* 14, no. 14 (2014).

67. Wen Zhihui, “速来围观！火箭军导弹夜间集群发射” [Onlookers come forth! Rocket Force conducts nighttime group launch], 中国军网 [China military online], June 3, 2016, http://www.81.cn/depb/2016-06/03/content_7085448.htm; “火箭军常规导弹部队实现夜暗连射与调旅火力突击” [Rocket Force conventional missile unit undertakes nighttime burst launch and adjusts brigade’s strikes], 解放军报 [PLA daily], May 13, 2016, <http://www.chinanews.com/mil/2016/05-13/7868972.shtml>; and “火箭军极寒气候对抗演练”蓝军“超狠令官兵意外” [Rocket Force extreme cold weather exercise, blue army’s extreme hardiness surprises officers], Military—People’s daily online, January 28, 2016, <http://military.people.com.cn/n1/2016/0128/c1011-28091140.html>.

other challenges.⁶⁸ A launch brigade has reportedly even constructed a new training facility to simulate challenging weather conditions, including “rain, snow, gale-force winds, fog and lightning, as well as electronic warfare situations.”⁶⁹ Units training at the facility reportedly have also donned protective suits meant for operating in conditions of biological warfare.

Third, the Rocket Force has increased joint exercises to improve coordination with the units of both the other services and of the newly established TCs. Improving jointness has been a key goal of the recent wave of military reforms. As part of those reforms, the PLA replaced the old military regions with new TCs. Each of these TCs, established with an eye to what the PLA considers the most likely future conflicts, feature a joint operations command center.⁷⁰ These efforts comport with efforts to emphasize joint operations within PLA-wide training.⁷¹ The Rocket Force had in the past at least paid lip service to the

68. Li Yongfei and Tian Liang, “出门即出征火箭军某旅专挑险难环境” [Going out means going out to battle: A certain PLA Rocket Force brigade moves in a rare difficult environment], *解放军报* [PLA daily], May 26, 2016, http://www.81.cn/depb/2016-05/26/content_7073091.htm.

69. Zhao Lei, “New Rocket Force Gets Facility to Acclimate Its Soldiers,” *China Daily*, February 1, 2016, http://www.chinadaily.com.cn/china/2016-02/01/content_23333248.htm.

70. For more on the recent reforms and their implications for joint operations, see Wuthnow and Saunders, *Chinese Military Reforms*; and Joel Wuthnow, “A Brave New World for Chinese Joint Operations,” *Journal of Strategic Studies* 40, no. 1 (2017): 169–95.

71. Mark R. Cozad, “PLA Joint Training and Implications for Future Expeditionary Capabilities” (testimony before the US-China Economic and Security Review Commission, Washington, DC, January 21, 2016).

need to conduct joint operations, but as recently as 2014, “few instances of actual joint training were reported” for the Rocket Force.⁷² By contrast, as of mid-2017, the Rocket Force reportedly had fired “hundreds of missiles in live-fire exercises over the past few years to improve its combat readiness. The missiles were fired during about 40 exercises within the force itself, as well as during more than 30 joint drills between the force and other military branches and regional theater commands, according to the release.”⁷³

If public reporting is any indication, the new Rocket Force appears to have significantly increased its focus on jointness. Under the Rocket Force, the *PLA Daily* features significantly more articles that address both the missile forces and the concept of jointness than it did under the Second Artillery Corps. In the 24 months before the establishment of the Rocket Force, the *PLA Daily* included 20 articles addressing both jointness and the Second Artillery Corps. In the 23 months since the Rocket Force’s establishment, the *PLA Daily* has run 271 such articles (see figure 2-5). The dramatic increase in reports at the beginning of 2016, while providing evidence of increased tempo, also suggests that the level of reporting may exaggerate the actual tempo. If number of monthly reports were an accurate measure of actual joint exercise tempo, one might expect to see a more gradual buildup over time as these exercises are developed. Instead, one sees a sharp dichotomy around the creation of the Rocket

72. Kenneth W. Allen and Jana Allen, *Building a Strong Informatized Missile Force* (Washington, DC: Jamestown Foundation, 2015), 3.

73. Zhao Lei, “Rocket Force More Versatile,” *China Daily*, June 21, 2017, http://usa.chinadaily.com.cn/epaper/2017-06/21/content_29830330.htm.

Force. In addition to the increase in joint exercises, recent reporting suggests that the Rocket Force may also have reformed some of its command and control structures to better integrate Rocket Force units with the forces of other military services and with those of TCs.⁷⁴ For example, reports increasingly mention attempts by the Rocket Force to integrate or build into TC joint operations command centers and some accounts reference the presence of Rocket Force officers within those joint operations command centers.⁷⁵ The Rocket Force has been working to better coordinate future joint operations with other forces, including the newly established Strategic Support Force.⁷⁶

74. For some evidence, see David C. Logan, "Making Sense."

75. "某基地联战联训淬炼制胜'铁拳'" [A certain base's joint training wins "Iron Fist"], 火箭军报 [Rocket Force news], November 11, 2017, 1; and Guo Yuandan, "中国战区如何打仗: 中国战区如何打仗: 体系深度联合, 指挥一体融合, 指挥一体融合" [How China's Theater Commands conduct operations: By truly joining systems and fusing command and control entities], 环球网 [Global times], October 9, 2017, <https://mil.huanqiu.com/article/9CaKrnK5t3j>.

76. "火箭军同战略支援部队讨论联合作战现场热烈" [Rocket Force and Strategic Support Force discuss joint warfighting], 解放军报 [PLA daily], February 3, 2016, <https://mil.huanqiu.com/article/9CaKrnJTEmD>.

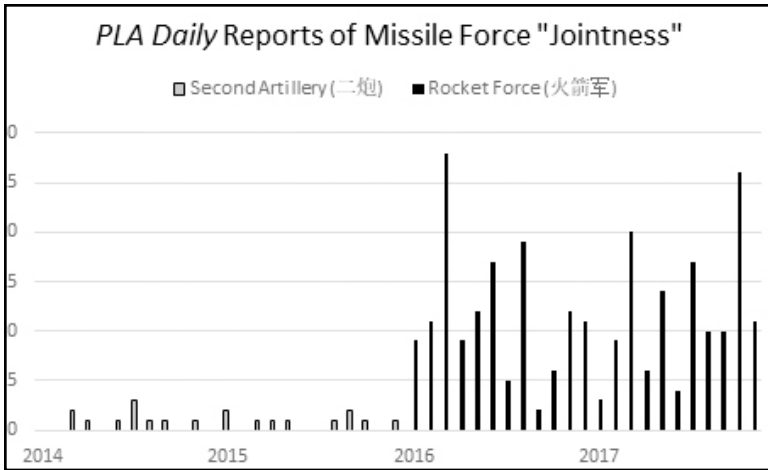


Figure 2-5. Number of *PLA Daily* articles each mentioning jointness and China’s missile forces in the 24 months preceding (gray bars) and following (black bars) the establishment of the Rocket Force

Reporting on jointness under the Rocket Force increased noticeably in comparison to that under the Second Artillery Corps.

Despite these reforms and improvements, the Rocket Force may still face significant obstacles to performing effective joint operations. For example, although the recent military reforms were intended to reduce the army’s traditional dominance of the military, 9 of the 10 highest ranking officials in the newly established TCs were drawn from ground forces.⁷⁷ And despite the structural changes to the force, the Rocket Force still faces the challenges of producing soldiers who can effectively function in

77. Phillip C. Saunders and John Chen, “Is the Chinese Army the Real Winner in PLA Reforms?” *Joint Force Quarterly* 83 (Fourth Quarter, 2016): 44–48.

a joint environment.⁷⁸ As one Rocket Force brigade commander has lamented, “Under the new system, individual cadres have not changed their thinking in a timely manner. The problem of ‘old wine in new bottles’ still exists.”⁷⁹ These problems appear to be present across the PLA, as, according to one US expert, “press reporting highlighted cases in which PLA commanders were not well-versed in the wide range of capabilities at their disposal, failed to coordinate and share information among the units under their command, and demonstrated weak command and organization skills.”⁸⁰

In its attempts to improve and increase both red-blue and joint exercises, the Rocket Force appears to be lagging behind the other services. For example, reporting on both red-blue and joint exercises involving the other services has regularly surpassed analogous reporting on the Rocket Force. In addition, the Rocket Force has been relatively slow to integrate

78. For more on the PLA’s efforts to develop personnel capable of effectively conducting joint operations, see Joel Wuthnow and Phillip C. Saunders, “A Modern Major General: Building Joint Commanders in the PLA,” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phillip C. Saunders and Joel Wuthnow (unpublished book), Microsoft Word file; and in this volume, McCauley, “Cultivating Joint Operations Talent.”

79. Feng Jinyuan and Yang Yonggang, “火箭军某导弹旅组织‘蓝军’督导专门‘找茬’” [Certain Rocket Force missile brigade organizes “blue army” supervision to specially “nitpick”], 解放军报 [PLA daily], June 13, 2016, http://www.81.cn/depb/2016-06/13/content_7097562.htm.

80. Mark R. Cozad, “PLA Joint Training.”

its command and control structures with those of the TCs.⁸¹

PERSONNEL RELIABILITY AND OPERATIONAL SECURITY: EMPHASIZING ELECTRONIC SECURITY AND PSYCHOLOGICAL STABILITY

Efforts have been made to enhance the reliability and operational security of Rocket Force personnel in recent years. Personnel reliability programs are a crucial component of militaries, especially of the units in control of a state's nuclear forces.⁸² This section reviews issues relating to China's personnel reliability programs, including political vetting of new recruits, psychological evaluations of personnel, and heightened concerns with electronic security.

Information on China's earliest personnel reliability efforts is scant, though early reliability measures appear to have focused on ensuring the political suitability of troops and safeguarding operational secrets by strictly isolating troops. Early on, technicians and officials associated with China's nuclear program were sequestered from the rest of society, sometimes including even members of their

81. For evidence these command and control arrangements had changed little after the reforms, see David C. Logan, "PLA Reforms and China's Nuclear Forces," *Joint Force Quarterly* 83 (4th Quarter, October 2016): 57–62. For a more recent assessment including evidence of some integration and remaining challenges, see David C. Logan, "Making Sense."

82. For a (somewhat dated) review, see Herbert L. Abrams, "Human Reliability and Safety in the Handling of Nuclear Weapons," *Science & Global Security* 2, no. 4 (1991): 325–49.

immediate family.⁸³ According to one unofficial account reportedly authored by a former member of the early Second Artillery Corps, the unit specifically targeted the Chinese countryside for recruitment, and new recruits reportedly faced two requirements: Their previous three family generations must all have been “red” (祖宗三代都要红) and they had to come from families designated as poor or lower-middle peasants (贫下中农).⁸⁴ As recently as the 1990s, China’s personnel reliability program was reported to still consist of an investigation into the individual’s political background, but seemingly without similar investigations into the potential for financial coercion, psychological instability, or substance abuse.⁸⁵

Today, the focus on political vetting of Rocket Force personnel continues. Recruits must undergo a political investigation before entry to the military. These political investigations are carried out at the county level, with the local public security bureau in charge and other relevant bureaus providing assistance. The investigations typically involve interviews with people in the applicant’s family, workplace, and school. In the Xi era, several high-level statements have reaffirmed the importance of the PLA following the Communist Party of China’s (CPC) lead, while

83. John Wilson Lewis and Xue Litai, *China Builds the Bomb* (Redwood City, CA: Stanford University Press, 1991), 95, 162; and Chinese expert, interview by the author, August 2018.

84. “青春红似火(6)二炮组建政审严 转场河南夜难眠” [A youth red as fire part 6: The Second Artillery establishes strict political review, transfer to Henan, and sleepless nights], 人过五十网 [China 50 plus], April 24, 2009, <http://www.china50plus.com>.

85. Herbert L. Abrams, “Human Reliability and Safety in the Handling of Nuclear Weapons,” *Science & Global Security* 2, no. 4 (1991): 339.

some observers have worried the military has begun to chafe under Xi's rule.⁸⁶ In addition to the general political investigations required of PLA soldiers, the Rocket Force reportedly has higher standards for political suitability given its sensitive missions and symbolic importance.⁸⁷ For example, applicants to the master's program at the Rocket Force University of Engineering (火箭军工程大学) must submit a political investigation form (政治审查表) (see figure 2-6), which solicits information about an applicant's political outlook (政治面貌), family background (家庭出身), and examples of how they have demonstrated their political ideology (政治思想工作表现). As mentioned earlier in the chapter, the first requirement listed for applicants to the Rocket Force Command College is a "firm political position," which comes before requirements related to physical fitness standards, mental health, and academic credentials.⁸⁸

86. Liu Hang, "深入抓好思想政治建设" [Thoroughly grasp ideological and political construction], 解放军报 [PLA daily], February 5, 2017, http://www.81.cn/jmywyl/2017-02/05/content_7476452.htm; and Lily Kuo, "Xi Jinping Calls for 'Absolute Loyalty' from Chinese Army," *Guardian*, August 20, 2018, <https://www.theguardian.com/world/2018/aug/20/xi-jinping-calls-for-absolute-loyalty-from-chinese-army>.

87. Liu Hongwei, Cai Ruijin, and Yang Yonggang, "习近平为火箭军授旗之后发生了什么?" [What happened after President Xi awarded the rockets?], 解放军报 [PLA daily], January 16, 2016, http://www.81.cn/jmywyl/2016-01/16/content_6859456.htm.

88. "2018 master's student admission guide."

报考硕士研究生对象政治考核登记表									
姓名		性别		人员类别	填写国防生或地方生	政治面貌		家庭出身	
现学习工作单位					报考学科				
政治思想工作表现									
何时、何地受过何种奖励或处分									
家庭主要成员情况									
直系亲属受刑事处罚、党纪、政纪处分情况									
主要社会关系、境外关系情况									

Figure 2-6. Excerpt of the Political Investigation Form required for applicants to master’s programs at the Rocket Force University of Engineering

In addition to the continued focus on political reliability, the Rocket Force has, in recent years, focused on increasing personnel reliability in two other areas: psychological well-being and electronic security. This focus parallels increased concerns over mental health across the PLA, though the Rocket Force appears to be moving earlier and faster because it faces more serious mental health challenges.⁸⁹ According to one large-scale analysis of more than 50,000 soldiers

89. For a strong overview of these efforts, see Zi Yang, “China’s Military Mental Health System in Transit” (PowerPoint presentation, S. Rajaratnam School of International Studies, Singapore, n.d.).

from across the PLA, Rocket Force troops received the lowest mental health scores, below their counterparts in the army, navy, air force, and Strategic Support Force.⁹⁰ In response to these challenges, China's missile forces are dedicating greater resources to studying and addressing psychological problems within the ranks. In the last few years, at least seven academic studies have been published investigating the factors affecting the psychological and emotional well-being of Rocket Force personnel. The earliest of these recent studies, published in the *PLA Journal of Preventive Medicine* in 2014, examined the psychological well-being, sleep patterns, and fatigue levels of soldiers in a then-Second Artillery unit.⁹¹ The study found, on most psychological measures, respondents fared better than the average population. But on measures of physical fatigue, mental fatigue, and overall fatigue, the scores were worse than average, and researchers recommended that the force work to promote better sleeping conditions and psychological support. Subsequent research focused on Rocket Force troops has examined the connections between the personality characteristics of new recruits and their mental health status, connections between soldiers' levels of psychological stress and the development of various psychological biases, the connection between stress and self-evaluation, and the methods by which missile

90. Feng Zhengzhi et al., "Establishment of norm of symptom checklist 90," 2211.

91. Luo Xianrong et al., "第二炮兵某部官兵心理, 睡眠, 疲劳状况调查" [An investigation into the psychological, sleep, and fatigue conditions of the soldiers in a Second Artillery unit], *解放军预防医学杂志* [PLA journal of preventive medicine] 32, no. 1 (February 2014): 49-50.

force troops regulate their emotions.⁹² These studies have noted areas for concern and have advocated for a greater focus on mental health within the ranks. Most recently, an assessment of the mental health status of Rocket Force troops concluded that “the mental health level of Rocket Force troops awaits improvement.”⁹³ The study notes other research, concluding that “in comparison with the mental health level of various other branches and services, the mental health level of the Rocket Force is comparatively low. For the majority of Rocket Force troops, the work environment

92. Cai Yun et al., “二炮某部新兵人格特征与心理健康水平相关性研究” [Research on the correlation between personality characteristics and mental health level on new recruits in a Second Artillery unit], 人民军医 [People’s military surgeon] 57, no. 5 (May 2014): 467–8; Xu Yuanyuan et al., “二炮某部队军人心理应激水平与心理弹性、认知偏向核积极情绪的关系” [Relationships of psychological stress with resilience, cognitive bias and positive affect in a troop of Second Artillery Force], 第三军医大学学报 [Journal of the Third Military Medical University] 37, no. 7 (April 2015): 698–702; Tian Yiqin et al., “二炮某部军人高原驻训期间作业疲劳状态与心理应激、压力感知核自我效能感的关系” [Relationship of military fatigue with psychological stress, stress perception and self-efficacy in soldiers from Second Artillery Corps during plateau encamping], 第三军医大学学报 [Journal of the Third Medical University] 37, no. 21 (2015): 2156–9; Wu Tong et al., “火箭军某部军人运用积极情绪上调方式的调查” [Survey on positive emotion-promoting strategies in military personnel from a troop of Rocket Force], 第三军医大学学报 [Journal of the Third Military Medical University] 39, no. 7 (2017): 597–602; and Huang Weirong et al., “二炮某部军人情绪调节方式的特点研究” [Investigation into the emotional regulation methods of Second Artillery troops], 第三军医大学学报 [Journal of the Third Military Medical University] 38, no. 38 (2016): 1581–84.

93. Hua Yan et al., “火箭军某部官兵心理健康现状及其影响因素分析” [An analysis of the mental health of soldiers in a Rocket Force unit and their influencing factors], 人民军医 [People’s military surgeon] 61, no. 6 (June 2018): 480.

is abominable, with an isolating work environment, arduous lifestyle requirements, strict group discipline, and high-intensity military training.”

This extensive research on the troops’ psychological well-being has been accompanied by efforts to strengthen mental health in the barracks and in the field. Recent public accounts note that training for new recruits emphasizes the importance of mental health, educating troops in how to regulate their emotions in the face of adversity, implementing regular psychological examinations, and distributing military mental health pamphlets.⁹⁴ Rocket Force psychological consultants have written that the normal psychological challenges of military work can be further exacerbated by the intense secrecy and isolation of China’s missile forces.⁹⁵ Thus, the Rocket Force provides counseling services to its troops.⁹⁶ Despite these efforts, officials note challenges, including concerns that the stigma attached to mental health challenges would prevent some soldiers from seeking treatment.⁹⁷

Since the creation of the Rocket Force, reporting on electronic security within the missile forces has

94. Wu Yongfang and Chen Chaoming, “二炮某部给新战士脆弱心理‘补钙’” [A Second Artillery unit gives a supplement to new troops with weak psychology], *人人健康* [Health for everybody] 2 (2014): 51.

95. Mo Peng and Chen Xiuli, “火箭军总医院史杰：官兵的心灵‘守护神’” [Rocket Force General Hospital’s Shi Jie: The guardian spirit of soldiers’ minds], *解放军报* [PLA daily], March 24, 2016, http://www.81.cn/zghjy/2016-03/24/content_6975090.htm; and Kang Changyi, “密闭环境，如何保持心理健康” [How to maintain psychological health in an airtight environment], *解放军报* [PLA daily], December 22, 2016, http://jz.chinamil.com.cn/n2014/tp/content_7418510.htm (site discontinued).

96. Kang Changyi, “How to maintain psychological health.”

97. Kang Changyi, “How to maintain psychological health.”

increased markedly. The growing digitalization of Chinese society and the entrance of a younger generation into the military ranks has introduced new potential vulnerabilities to the PLA. The broader PLA and the Rocket Force have tried to mitigate these risks with new guidelines and training focused on electronic security. In July 2015, the four General Departments issued new guidelines related to management within the PLA, including provisions for the use of smartphones and other network devices.⁹⁸ The regulations reportedly relaxed restrictions on cell phone networks, permitting soldiers to use them during extracurricular periods and rest or holiday times, provided they maintained appropriate security.⁹⁹ Specific rules governing phone usage were to be set at the division level, though some Rocket Force units have reportedly struggled to cope with the new digital world. One recent report on electronic security within a Rocket Force base included a litany of violations and missteps.¹⁰⁰ An officer uploaded photos of his uniform to social media, potentially revealing secret information. Soldiers listed the exact name and location of the base when shopping online.

98. “四总部颁发关于进一步规范基层工作指导和管理秩序若干规定” [Guidelines on further improving and standardizing grassroots work and order management], *Military – People’s Daily Online*, July 3, 2015, <http://military.people.com.cn/n/2015/0703/c1011-27246704.html>.

99. For a summary of the new guidelines, see “图解基层工作指导和管理新规定” [Graphic: New rules for grassroots work guidance and management], *中国军网* [China military online], 2015, http://www.81.cn/2015jcgld/node_78327.htm.

100. Wang Weidong, Wu Tianxi, and Cheng Pengyu, “智能手机撞开了军营“哪扇门?” [Have smartphones broken down the barracks door?], *解放军报* [PLA daily], December 9, 2016, http://www.81.cn/jfjbmap/content/2016-12/09/content_163770.htm.

One new recruit, whose phone was confiscated by the security office upon entering the base, began illicitly purchasing replacements until he had acquired four new cell phones. A company commander had not realized that his smart-device bracelet could connect to his smartphone and that the Bluetooth and GPS functions could leak sensitive information. Some soldiers, in attempts to circumvent restrictions about social media posting, have resorted to puns or wordplay to communicate publicly about sensitive work topics.¹⁰¹ But, the report admonishes, “if the enemy truly understands detection, they will not fear our ‘code words.’”¹⁰²

To enhance these apparent weaknesses in electronic security, the Rocket Force has resorted to training, education, and new policies. Some of these efforts can be seen in articles published in the monthly *Secrets Protection* (保密工作), a publication of the General Office of the Secrets Protection Committee of the Communist Party of China’s Central Committee that reports on efforts by the PLA and government bodies to maintain secrecy, as well as counterespionage efforts. A 2016 report in the periodical highlighted efforts to train new recruits in operational security.¹⁰³ The report noted the new recruits were mostly born after 1996, and “cell phones and computer games

101. Du Lilong, “安全保密不可‘掩耳盗铃’” [One cannot bury one’s head in the sand when it comes to security and secrecy], 解放军报 [PLA daily], August 25, 2017, http://www.81.cn/jfjmap/content/2017-08/25/content_186417.htm.

102. Du Lilong, “One cannot bury one’s head in the sand.”

103. Chen Shifeng and Li Qun, “火箭军某基地:新兵未入营,保密已先行” [At a certain Rocket Force base, new recruits have not yet entered the base and the work of secrets protection already begins], 保密工作 [Confidential Work] 10 (2016): 42.

had developed right alongside them. Thus, the unit's management of this factor was very strict."¹⁰⁴ The unit attempted to enhance soldiers' awareness of electronic security by registering and centrally storing electronic devices which could release sensitive information and by keeping detailed records of recruits' social media activities. A Rocket Force brigade tried to inculcate better electronic security practices through educational demonstrations, advisory films, and regular trainings.¹⁰⁵ Barracks have begun to require that soldiers receive certification before purchasing an Internet card, and bases are coordinating with mobile phone providers to ensure that troops do not receive potentially dangerous equipment.¹⁰⁶ Enhancing digital security has sometimes meant resorting to older technologies and practices. Calls between senior officers are not made directly; instead, they are connected by a central communications regiment. As an account of the regiment noted, "The military's demand for confidentiality forbids an online directory of internal phone numbers, let alone those for high-ranking officers. Having an operator pass through calls

104. Chen Shifeng and Li Qun, "New recruits have not yet entered the base," 42.

105. Pei Xian and Hao Jiangzhen, "网络共享进军营, 信息安全咋把握?" [Network sharing enters the barracks: How does one grasp information security?], 解放军报 [PLA daily], June 14, 2017, http://www.81.cn/jfjbmap/content/2017-06/14/content_179963.htm.

106. Pei Xian and Hao Jiangzhen, "Network sharing enters the barracks."

still remains the most secure way, and paradoxically, the quickest way for getting through.”¹⁰⁷

Despite the increased academic and operational focus on psychological health and electronic security, gaps still exist in Rocket Force vetting. For one, no public reports of efforts to ensure that a Rocket Force member is not vulnerable to financial coercion or substance abuse have surfaced. In addition, despite the recent focus on mental well-being and electronic security, a recent review of media reporting, official documents, and academic literature did not uncover any evidence that the Rocket Force proactively screens potential recruits for either psychological health or good digital hygiene. The force may be using education and other indicators as proxies for reliability, but these may represent weaknesses in the Rocket Force’s screening and personnel reliability efforts. This observation is particularly troublesome given the difficulties of working in China’s missile forces and the recent decision by the PLA to admit recruits with potentially serious mental health challenges.

PROMOTION AND CAREER PATHS: ADVANCING THE CONVENTIONALLY ARMED AND THE LOYAL

Assessing the personal and institutional ties of officers who are promoted can provide evidence about the current and future priorities of China’s missile forces. Recent promotion patterns suggest the Rocket Force may be prioritizing the conventional mission set, followed by the strategic nuclear deterrent, and

107. Chen Boyuan, “Female PLA Operators Link Rocket Force,” China Internet Information Center, March 16, 2017, http://www.china.org.cn/china/2017-03/16/content_40463599.htm.

then regional nuclear deterrent missions. Evidence has surfaced that senior Rocket Force officials may have been promoted due to their personal loyalties to Xi Jinping. Finally, the selection of Rocket Force officers for key PLA-wide positions suggests the service is gaining in power and prestige relative to the army, navy, and air force.

Previous work analyzing the career paths and promotion patterns of officers within China's missile forces suggested the force may be prioritizing the conventional mission set and units over the nuclear one.¹⁰⁸ Senior commanders within the Rocket Force were more likely to have early career experience working in Base 61 (the former Base 52), the force's premier conventionally armed base opposite Taiwan (see figure 2-7 below). The Rocket Force's intercontinental ballistic-missile bases, responsible for strategic nuclear deterrence, were the next most likely to be represented among the experience of senior leaders. Bases assigned regional nuclear deterrent missions and equipped with nuclear-armed medium and intermediate-range missiles were the least likely to be represented. In addition, when base commanders were transferred laterally, they were likely to be transferred away from bases assigned a regional nuclear deterrent role and toward those assigned a strategic nuclear deterrent mission and those assigned a conventional mission set. Since that analysis, at least four individuals have entered the ranks of the Rocket Force's senior leadership: Base 62 Commander Xia Xiaoping, Base 65 Commander Zhao Xiuling, Base 66 Commander Xue Jinfeng, and Rocket

108. Logan, "Career Paths."

Force Deputy Commander Zhang Zhenzhong.¹⁰⁹ The career histories of these officers correspond with earlier findings suggesting the prioritization of the conventional and then strategic nuclear mission set; prior to their ascension to the ranks of senior leadership, each of the officers served in either the conventionally focused Base 61 (former Base 52) or the intercontinental ballistic missile-equipped Base 66 (former Base 54). The ways in which the introduction of dual-capable systems such as the DF-21 and DF-26 might change the structure, identity, and priorities of the Rocket Force are not yet clear.

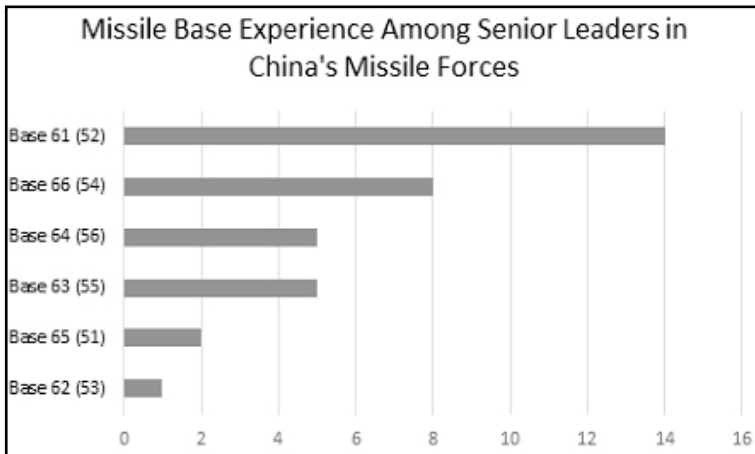


Figure 2-7. Number of Rocket Force (and Second Artillery Corps) senior leaders who served in each missile base prior to their promotion to the level of senior leadership

Missile bases are listed with current Rocket Force designation (61–66) and former Second Artillery designation (51–56). The overrepresentation of Base 61 suggests an institutional prioritization of the conventional mission set.

109. For more on definitions and the research methodology, see Logan, “Career Paths,” 6–7.

Data on promotions from the Xi era continue to suggest the Rocket Force may prioritize experience with conventional units. In 2017, Zhou Yaning was appointed the new commander of the Rocket Force, replacing Wei Fenghe (who would go on to become defense minister).¹¹⁰ Zhou had previously served as a deputy commander within China's missile forces and, previously, as commander of Base 61. But Zhou has important ties to the conventional side of the missile forces, beyond just his experience commanding the former Base 52. Early in his career, Zhou served as commander of a Base 52 brigade equipped with the short-range conventionally armed DF-11. As head of former Base 52, Zhou is also believed to have overseen the introduction of the DF-21D anti-ship ballistic missile into the force.¹¹¹ In 2014, Zhou was one of the featured speakers at an event to commemorate the 10-year anniversary of the death of Yang Yegong, a vaunted one-time commander of the former Second

110. Mimi Lau, "China's Missile Forces Get a New Tech-Focused Commander," *South China Morning Post*, September 16, 2017, <https://www.scmp.com/news/china/diplomacy-defence/article/2111497/chinas-missile-forces-get-new-tech-focused-commander>.

111. Mark Stokes and Russell Hsiao, "Leadership Transitions in the Second Artillery Force at the 18th Party Congress: Implications for Roles and Missions," Project 2049, May 7, 2012, <https://project2049.net/2012/05/07/leadership-transitions-in-the-second-artillery-force-at-the-18th-party-congress-implications-for-roles-and-missions/amp/>.

Artillery Corps who has been called the pioneer and founder of the conventional missile arm.¹¹²

In addition to his history with the conventional units, Zhou has emphasized the importance of advanced technology for fighting future wars. In a 2011 article, Zhou argued, "Warfare in the future will be largely dependent on weapons. Strategy will only help to refine and supplement the technology."¹¹³ A report from just around the time he was assigned to command Base 52 described Zhou as believing that "technology and tactics are fused. Technology determines tactics. This is a vivid feature of the way in which the generation of combat power is transforming."¹¹⁴

Promotions of Rocket Force officials may be guided by personal loyalty to Xi Jinping, who is reportedly

112. For a report on the commemoration event, see "黄山：杨业功逝世十周年纪念仪式举行" [Huangshan: An event to commemorate the ten-year anniversary of the passing of Yang Yegong is held], 中国文明网 [China civilization network], July 3, 2014, http://wenming.cn/syjj/dfcz/ah/201407/t20140703_2040586.shtml. For more on Yang Yegong and his importance to the conventional missile forces, see Jeffrey Lewis, "Yang Yegong"; "时代先锋：导弹司令员杨业功" [Pioneer of the times: Missile Commander Yang Yegong], CCTV, July 2004, <http://www.cctv.com/news/special/C14394/index.shtml>; and "追忆火箭军常规导弹部队开拓者 如今已'百箭齐射'" [Recalling the pioneers of the Rocket Force's conventional missile units: Today already a hundred-arrow valley], China.com, September 7, 2017, https://military.china.com/history4/62/20170907/31311228_all.html.

113. Mimi Lau, "China's Missile Forces Get a New Tech-Focused Commander."

114. "二炮多种型号导弹联动攻防'中军帐'增设专家席" [Two types of Second Artillery missile systems link offense defense], 解放军报 [PLA daily], July 17, 2011, <http://www.chinanews.com/gn/2011/07-17/3187617.shtml>.

directly involved in promotions at the group army level and higher. Several of those promoted to senior positions in the Rocket Force have served in the former Nanjing Military Region, where Xi rose to prominence.¹¹⁵ Zhou Yaning served in the Nanjing Military Region during his time as commander of Base 61 (former Base 52). Gao Jin, another Rocket Force veteran of the Nanjing Military Region, was assigned command of the newly established Strategic Support Force.¹¹⁶ Former Rocket Force Commander and current Defense Minister Wei Fenghe was reportedly one of the first senior officers to pledge loyalty to Xi.¹¹⁷ According to one anonymous official, “Xi Jinping does not believe that ability is a key criterion for appointment—the only one is loyalty.”¹¹⁸ These moves to place political allies and subordinates in key positions comes against the backdrop of increasing

115. Oki Nagai, “Xi Packs Top Chinese Military Posts with Allies,” *Nikkei Asian Review*, September 20, 2017, <https://asia.nikkei.com/Politics/Xi-packs-top-Chinese-military-posts-with-allies>.

116. Willy Lam, “Xi Jinping Consolidates Power by Promoting Alumni of the Nanjing Military Region,” *China Brief* 15, no. 1 (2015): 3–5.

117. Minnie Chan, “‘Reticent’ General Wei Fenghe Could Be China’s New Defense Minister, Sources Say,” *South China Morning Post*, February 24, 2018, <https://www.scmp.com/news/china/diplomacy-defence/article/2134555/reticent-general-rockets-ranks-central-military>.

118. Jérôme Doyon, *Personnel Reshuffle in the PLA: The Two Promotions That Did Not Happen* (London: European Council on Foreign Relations, March 2016), 1.

public calls affirming the Communist Party of China's control of the military.¹¹⁹

Finally, promotion patterns among the highest levels of the PLA also suggest the Rocket Force may be gaining in organizational power relative to the other services. Two of the six military positions on the Central Military Commission are occupied by Rocket Force personnel and Rocket Force commanders have taken the helm of other key military, state, and Communist Party of China positions. Wei Fenghe, a former Rocket Force commander, was promoted in 2018 to minister of national defense and state councilor.¹²⁰ Gao Jin, a former top commander in the Second Artillery Corps, was assigned command of the newly established Strategic Support Force, which is believed to be focused on "combat in space, cyberspace, and the electromagnetic domain."¹²¹ Zhang Shengmin, who spent most of his career as a political commissar in China's missile forces, now serves as both secretary of the Central Military Commission's Commission for Discipline Inspection and as deputy secretary of the Central Commission for Discipline Inspection, the country's highest-level

119. Josephine Ma, "Chinese President Xi Jinping Returns to Public Stage with Renewed Call for Military Loyalty to the Communist Party," *South China Morning Post*, August 19, 2018, <https://www.scmp.com/news/china/diplomacy-defence/article/2160400/chinese-president-xi-jinping-returns-public-stage>.

120. "Defense Minister," Ministry of National Defense of the People's Republic of China, n.d., <http://eng.mod.gov.cn/Ministry/index.htm>.

121. John Costello, "The Strategic Support Force: Update and Overview," *China Brief* 16, no. 19 (2016).

anti-corruption body.¹²² Until recently, Rocket Force officer Chen Guangjun commanded the newly consolidated intelligence apparatus, and the Rocket Force was the second most represented service among Joint Staff Department heads.¹²³

IMPLICATIONS FOR THE ROCKET FORCE: MORE ADVANCED, MORE BELLIGERENT, BUT LESS CAPABLE?

These personnel policies and trends motivate important implications for the Rocket Force, for the broader PLA, and for US-Chinese security relations. For the Rocket Force, the evidence presented here suggests an organization still aligned toward the conventional mission set, increasingly focused on advanced technology, and perhaps better positioned to execute joint operations. For the PLA, evidence of a greater emphasis on loyalty over effectiveness suggests a both less capable and more aggressive military. Finally, for US-Chinese security relations, Xi's emphasis on personal loyalty and his concentration of political power could suggest a more aggressive China, while more robust operational security and personnel reliability programs could improve strategic stability.

Evidence from personnel policies and trends suggests the Rocket Force may continue to prioritize the conventional component of its identity over the nuclear one. The placement of Rocket Force personnel

122. Zhao Lei, "Nation's Top Military Body Appoints New General," *China Daily*, November 3, 2011.

123. Zi Yang, "Rocket Force Gaining Power in China's Army-Dominated PLA," *Asia Times*, September 23, 2017, <https://asiatimes.com/2017/09/rocket-force-gaining-power-chinas-army-dominated-pla/>.

in key military posts throughout the PLA, along with the recent elevation of the Rocket Force, suggests China's missile forces will enjoy more power relative to the other military services. This status could mean a more independent Rocket Force that is able to make a play for important strategic military capabilities, or one that is better positioned to set its own policies and doctrine. Historically, China has been relatively restrained in the development and deployment of its (nuclear) missile forces,¹²⁴ affirming that it "has never participated in any form of nuclear arms race, nor will it ever do so."¹²⁵ But the Rocket Force's focus on highly educated recruits and Commander Zhou Yaning's focus on advanced technology suggest the force may continue to develop and deploy new capabilities. In 2018, some media reports quoted Chinese observers arguing that Beijing should consider developing new smaller-yield warheads, and information released by the Chinese Academy of Engineering Physics suggests

124. For recent evidence on Chinese thinking toward nuclear weapons, see Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Posture and US-China Strategic Stability," *International Security* 40, no. 2 (Fall 2015): 7-50. For a review of some of the technical and organizational challenges China could face in adopting a more aggressive nuclear posture, see David C. Logan, "Hard Constraints on a Chinese Nuclear Breakout," *Nonproliferation Review* 24, no. 1-2 (2017): 13-30.

125. Chinese Ministry of National Defense, "China's National Defense in 2010" (white paper, Chinese Ministry of National Defense, March 2011).

China may be increasing the frequency with which it conducts simulated nuclear tests.¹²⁶

At the operational level, the Rocket Force's focus on increasing the frequency and complexity of joint exercises, as well as attempts to further integrate command and control structures between China's missile forces and those of the TCs, could enhance the ability of the missile forces to coordinate with other units in joint campaigns. But significant challenges remain. Whether the Rocket Force and the PLA at-large will be able to overcome these challenges, especially in the near term, remains to be seen.

At the strategic level, however, to the extent that the PLA under Xi Jinping prioritizes political loyalty over military effectiveness as a criterion for promotion, the ability of the Chinese military to fight and win future wars may be jeopardized. Indeed, findings from political science suggest that the militaries of authoritarian states are, on average, less effective,

126. “美国大玩核火早晚烧到自己眉毛” [If the US plays with nuclear fire, it will eventually burn its own eyebrows], 环球时报 [Global times], February 5, 2018, <http://news.sina.com.cn/o/2018-02-05/doc-ifyremfz4996202.shtml>; “美国要降低核武器使用门槛 中国应做这四件事回应” [The US wants to lower the nuclear threshold—China should do these four things to respond], 环球时报 [Global times], February 5, 2018, <https://mil.sina.cn/2018-02-05/detail-ifyremfz5016306.d.html?cre=tianyi&mod=wpageloc=4&r=0&doct=0&rfunc=0&tj=none&tr=12>; Raymond Wang, “Making Sense of Chinese Reactions to the US 2018 Nuclear Posture Review,” *Diplomat*, February 24, 2018, <https://thediplomat.com/2018/02/making-sense-of-chinese-reactions-to-the-us-2018-nuclear-posture-review/>; and Stephen Chen, “China Steps up Pace in New Nuclear Arms Race with US and Russia as Experts Warn of Rising Risk of Conflict,” *South China Morning Post*, May 28, 2018, <https://www.scmp.com/news/china/society/article/2147304/china-steps-pace-new-nuclear-arms-race-us-and-russia-experts-warn>.

in part because of the privileging of loyalty over merit and of coup-proofing policies which at times deliberately neuter the military's capabilities to reduce its potential threat to the regime.¹²⁷

The focus on political loyalty also suggests that perhaps China under Xi would be more likely to fight interstate conflicts. Some of the political science literature examining how patterns of interstate conflict vary with regime type may be instructive in plotting the future of Chinese security relations. Jessica Weeks, for instance, identifies four ideal types of authoritarian states: machine (civilian, non-personalist), boss (civilian, personalist), junta (military, non-personalist), and strongman (military, personalist).¹²⁸ Weeks finds evidence that authoritarian, personalist states are more likely to initiate interstate conflicts, as personalist leaders are less constrained by a domestic audience. Until recently, China's various features of consultative governance meant it could best be described as a machine.¹²⁹ But Xi Jinping's efforts to consolidate power and cultivate a personalistic rule may mean China is increasingly adopting characteristics of a

127. Caitlin Talmadge, *The Dictator's Army: Battlefield Effectiveness in Authoritarian Regimes* (Ithaca, NY: Cornell University Press, 2015).

128. Jessica L. P. Weeks, *Dictators at War and Peace* (Ithaca, NY: Cornell University Press, 2014), chapter 1.

129. Rory Truex, "Consultative Authoritarianism and Its Limits," *Comparative Political Studies* 50, no. 3 (2017): 329–61; and Rory Truex, *Making Autocracy Work: Representation and Responsiveness in Modern China* (Cambridge, UK: Cambridge University Press, 2016).

boss regime, one with fewer constraints at home and, therefore, more likely to initiate conflict abroad.¹³⁰

Finally, though China appears to be emphasizing important aspects of its operational security and personnel reliability programs, important weaknesses may still exist if the force does not adequately address the mental health of its troops or if it fails to screen for important security risks such as vulnerability to financial coercion or substance abuse. US officials may wish to engage their Chinese counterparts on issues of personnel reliability within the Rocket Force. Enhancing personnel reliability within nuclear programs may simultaneously enhance both positive and negative control of weapons, reducing risks of an accidental or unauthorized launch and strengthening strategic stability.¹³¹ Of course, the specifics of a state's nuclear security and personnel reliability programs are sensitive and closely held.

These personnel trends portend a complex future for China's missile forces. The PLA Rocket Force confronts a series of challenges in personnel management: competing with other elements of society and the PLA to attract high-quality recruits, balancing the Rocket Force's conventional and nuclear

130. Susan Shirk, "The Return to Personalistic Rule," *Journal of Democracy* 29, no. 2 (April 2018): 22–36; Minxin Pei, "China's Return to Strongman Rule," *Foreign Affairs*, November 1, 2017, <https://www.foreignaffairs.com/articles/china/2017-11-01/chinas-return-strongman-rule>; and Ryan Haas and Tarun Chhabra, "How Much Does Xi Matter? New Voices on China's Foreign Policy," Brookings, January 22, 2019, <https://www.brookings.edu/articles/how-much-does-xi-matter-new-voices-on-chinas-foreign-policy/> (site discontinued).

131. Peter D. Feaver, "Command and Control in Emerging Nuclear Nations," *International Security* 17, no. 3 (Winter 1992–1993): 160–87.

constituencies, guaranteeing the security of its nuclear weapons and the people who manage them, and managing the tensions between being red and being an expert. At the same time, however, China's missile forces have gained organizationally, thanks to the growth of its personnel and weapons systems and to the key promotions of some of its alumni. Although the future of the people of the Rocket Force remains to be seen, it is a future that will have important implications for the Rocket Force, the PLA, and Chinese security relations abroad.

3. THE THREE ENABLERS: MANAGING AND ASSURING ACCESS FOR PEOPLE'S LIBERATION ARMY BASES AND OVERSEAS OPERATIONS

Eric Kiss

This chapter discusses China's ability to manage its current and potential overseas bases. China will most likely continue to expand its global presence to ensure its economic ambitions. To be successful, the People's Liberation Army (PLA) will require three key enablers if it is to obtain and maintain the access and privileges to leverage its overseas bases. These enablers include foreign-area expertise, legal support, and contracting for base support. If the PLA fails to develop these capabilities, it could fail to successfully manage the political and social dynamics of host nations necessary to leverage an overseas base.

POLICY IMPLICATIONS

- To support its global ambitions, China will likely continue to expand its overseas bases, which will engender a narrative of resistance among the population of the nation hosting a PLA base.
- The PLA's apparent lack of expertise to manage the local host political, social, and economic dynamics could undermine China's overseas presence.
- If the PLA can incorporate the capabilities and expertise required to manage base access and privileges, it will require China to be more open and transparent concerning its strategic and global intentions.

Imagine the PLA has established a new base in a foreign country. The 1,000 soldiers, sailors, and airmen assigned to the base are tasked to support contingency missions important to China's interests in the region and to provide services to the base and force protection. The base relies on a consistent delivery of supplies from China to sustain the unit. The base relies very little, if at all, on the local economy, and the personnel living on the base are effectively isolated from local population.

After a year on the base, the periodic resupply is delayed due to storms, causing a shortage of food. The commander of the PLA force decides to use a contingency fund to buy food from a local market. A few select logistics soldiers from the base, with some ability in the local language, go to a small community market and buy up most of the food to feed personnel for about the next three days. The vendors in the market are happy, but the food prices go up as the supply in the market is diminished. Angry at the impact on the price of food and possessing a general resentment at the presence of foreign forces in their country, a small contingent of local men, women, and children gather outside to protest.

The protest is peaceful at first, and a small group of journalists are recording the event. Watching the protest is an armed PLA force protection contingent standing behind the large security gate. Among the protestors, a small group of younger individuals—who are known affiliates of a local group generally opposed to foreign occupiers—begin to agitate the crowd. Taking advantage of the lack of local authorities, they throw rocks at the gate in effort to provoke the Chinese guards. One rock strikes a PLA soldier, slightly injuring him. A second protestor then begins to throw a rock at the gate just as a PLA soldier turns his attention back to the crowd. Determining the rock-throwing protestor presents a danger to the safety of other PLA soldiers, he turns his weapon and fires, striking the rock-thrower in the chest. The other PLA soldiers, confused, also open fire on the crowd—hitting three other local protesters. The crowd begins to run away from the gate and disperse back into the local community. The media, now present, begins

to take pictures and videotape three individuals lying motionless on the ground.

The host-nation population and the opposition are swift to respond: They begin to criticize the government in power for the corruption that allowed the PLA to build the base in the first place. To assuage the local constituency and to avoid appearing weak, the president of the host nation demands the PLA soldiers, who fired the shots, be handed over to the local authorities for prosecution. The PLA, fearing for the safety of its troops and not wanting to subject them to local jurisdiction which will not be impartial, quietly returns them to China. Local anger escalates, resulting in the government of the host nation demanding the Chinese to leave.

The above scenario has not occurred, but it is plausible. Nations that manage an overseas presence have had to deal with a host of variables to ensure they can maintain the base access and privileges necessary to support effective overseas operations. This study asks whether China has the capabilities to maintain effectively the privileges and rights to sustain a base in a sovereign country.

This first part of this chapter confirms that China likely intends to expand its overseas basing posture to protect its interest and to realize its global economic ambitions. The second part of chapter identifies and discusses three important capabilities, or enablers, critical to establishing and maintaining bases and analyzes the PLA's capabilities in the areas of foreign-area expertise, legal support, and expeditionary contracting support. Every country hosting a military base from another country's military is different and presents unique challenges; as a result, these three enablers become very critical to an overseas mission. If the PLA is unable to successfully manage the unique set of dynamics in each country hosting a permanent

presence, its desire to protect its interest will end before it can even start.

The final part of this chapter speculates on the impact these enablers will have on the PLA and its policies. This analysis is a thought experiment, but some imagination is necessary in the attempt to extrapolate and raise questions for further inquiry concerning the future trends for the PLA transformation and to gain a better understanding of the ambitions of the People's Republic of China (PRC). Predicting exactly how the PLA will evolve as it takes on greater responsibilities for China's interests is impossible, but how the PLA responds to the pressures and pluralities of the international environment will have a tremendous impact on current rules-based order.

This chapter does not consider PLA deployments to participate in UN peacekeeping operations. Growing PRC confidence to stage the PLA in other countries outside of multilateral endorsements is creating new dilemmas for the international rules-based order in Djibouti and other PRC facilities that may have military utility.

ENSURING ACCESS FOR A NEW GLOBAL CHINA

Former US Secretary of Defense James Mattis stated, "We are aware China will face an array of challenges and opportunities in coming years."¹ With its new base in the country of Djibouti, China has taken a significant step toward securing its interests beyond its immediate periphery, and it will likely

1. James Mattis, "Remarks by Secretary Mattis at Plenary Session of the 2018 Shangri-La Dialogue" (speech, Singapore, June 2, 2018).

not be its last. Securing its economic interests is a natural outcome of China's current ambitions and a path which other countries with global economic interests have followed. But as these countries have learned, establishing and sustaining bases does not only involve securing real estate and putting up military facilities. Basing in foreign countries will present new challenges to the PLA when obtaining and maintaining the necessary access and privileges that are the prerogative of a host nation to grant. Command and control and logistics are obvious challenges, but less obvious is the ability to manage the local political, legal, and economic dynamics that have a profound impact on the legitimacy of a foreign presence or posture. PLA leadership will have to consider these factors and build the capabilities required to successfully manage these dynamics. These capabilities, which will be imperative to ensure the PRC is able to protect its interests through persistent global presence, will impact the internal culture and the international perceptions of the PLA.

MORE BASES IN PLACES?

China's Belt and Road Initiative, whether it is defined as a strategy, a policy, or strictly an economic initiative, will result in the entangling security issues and political blowback that have historically accompanied a country's global ambitions.² As the PRC proffers huge infrastructure projects and business investments to countries—especially those

2. Eric Kiss and Kate Zhou, "China's New Burden in Africa," in *Dancing with the Dragon: China's Emergence in the Developing World*, ed. Dennis Hickey and Baogang Guo (Lanham, MD: Lexington Books, 2010), 145–64.

with emerging economies and fragile political and/or social systems—it will be vulnerable to threats to the supposedly altruistic Belt and Road Initiative. The PRC will, undoubtedly, take steps to ensure the security of its interests, investments, supply chains, and the Chinese diaspora that emigrates to support these projects. As Tim Heath states in his study on PRC overseas security, “if China lacks a reliable way to protect its interests in unstable countries, ambitious infrastructure and investment projects could suffer heavy losses or remain unrealized.”³

Devin Thorne and Ben Spevack point out that security is inseparable from its economic ambitions. In their report, *Harbored Ambitions: How China’s Port Investments Are Strategically Reshaping the Indo-Pacific*, Thorne and Spevack assert that while the impetus for the Belt and Road Initiative is economic gain, “Chinese analysts . . . routinely prioritize China’s national security interests over the objective of mutually beneficial economic development, contradicting the position of official policy documents.”⁴ President Xi Jinping would much rather highlight the altruistic intentions and the mutual benefits of his hallmark initiative; however, the PRC understands it must protect its ambitious economic interests.⁵

In the PRC’s 2015 white paper on military strategy, the PLA is directed to shoulder a list of tasks, “to

3. Tim Heath, *China’s Pursuit of Overseas Security* (Santa Monica, CA: RAND Corporation, 2018), ix.

4. Devin Thorne and Ben Spevack, *Harbored Ambitions: How China’s Port Investments are Strategically Reshaping the Indo-Pacific* (Washington, DC: C4ADS, 2018), 4.

5. Tanner Greer, “One Belt, One Road, One Big Mistake,” *Foreign Policy*, December 6, 2018, <https://foreignpolicy.com/2018/12/06/bri-china-belt-road-initiative-blunder/>.

safeguard the security of China's overseas interests."⁶ Among a host of other threats to China's rise, violent extremist groups top the list. China is currently more focused on its own domestic terrorist threat, which the government attributes to Uighur Muslims, but China recognizes the need to address the threat outside of PRC borders as well. Zhang Xiaoqi, intelligence chief at China's paramilitary People's Armed Police, said, "anti-terror fight preparations" must be ready to safeguard national strategic interests anywhere, and "the mission scope of the special forces stretches from land to sea, from home to abroad."⁷ The new PRC anti-terrorism law endorses Zhang's ambition by mandating that the PLA and the People's Armed Police leave the country for counterterrorism purposes at the approval of the Central Military Commission (CMC).⁸

The new PLA Navy base in Djibouti was a watershed moment for the PLA and China, lending evidence the PLA intends to extend its reach outside of a multilateral consensus; however, this is not a new idea. In a 2015 report published in the *PLA Daily*, basing was viewed as a way to extend a nation's influence and act as "bridgehead" (桥头堡) to participate in

6. Information Office of the State Council, "China's Military Strategy" (white paper, Information Office of the State Council of the PRC, May 26, 2015).

7. Ben Blanchard, "China Eyes Anti-Terror Force to Protect Overseas Interests," Reuters, September 29, 2018, <https://www.reuters.com/article/us-china-defence-security/china-eyes-anti-terror-force-to-protect-overseas-interests-idUSKCN1M909U>.

8. National People's Congress of the PRC, *Xinjiang Uighur Autonomous Region Regulation on De-Extremification* (Standing Committee of the 13th People's Congress of the Xinjiang Uighur Autonomous Region, October 9, 2018).

global affairs.⁹ Now with the rumors of additional bases from Tajikistan to Iceland and the extrapolation of China's intentions when it invests in distant places like Sri Lanka, China will likely continue to build bases in areas where it has strategic interests and can extend its influence.¹⁰ But the ways in which the PRC will handle the practical and diplomatic challenges to executing such contingencies are unclear.¹¹

For the first time, China unilaterally established a permanent military presence in a foreign country. In the past, China has preferred to manage its overseas deployment through multilaterally sanctioned UN peacekeeping operations, while under the auspices of the UN.¹² But the Chinese base in Africa is a clear departure from this preference. A UN staff that handles many legal aspects, coordinates local support, and organizes logistical support under UN operating procedures and agreements eradicates many of the

9. “外军海外基地扫描” [A scan of foreign military overseas bases], Chinamil.com, 2016, <http://txjs.chinamil.com.cn/>.

10. Gerry Shih, “In Central Asia’s Forbidding Highlands, a Quiet Newcomer: Chinese Troops,” *Washington Post*, February 18, 2019, https://www.washingtonpost.com/world/asia_pacific/in-central-asias-forbidding-highlands-a-quiet-newcomer-chinese-troops/2019/02/18/78d4a8d0-1e62-11e9-a759-2b8541bbbe20_story.html; Trym Aleksander Eiterjord, “China’s Busy Year in the Arctic,” *Diplomat*, January 30, 2019, <https://thediplomat.com/2019/01/chinas-busy-year-in-the-arctic/>; Maria Abi-Habib, “How China Got Sri Lanka to Cough up a Port,” *New York Times*, June 25, 2018, <https://www.nytimes.com/2018/06/25/world/asia/china-sri-lanka-port.html>; and “More Chinese Military Bases abroad Possible, PLA Strategist Says,” EFE, January 10, 2019, <https://www.efe.com/efe/english/world/more-chinese-military-bases-abroad-possible-pla-strategist-says/>.

11. Ben Blanchard, “China Eyes Anti-Terror Force.”

12. Heath, *China’s Pursuit*, ix.

challenges that emerge in a base similar to the one in Djibouti. Now, the PLA must set the necessary conditions on the ground conditions before China can successfully exploit its forward stationed capacity to augment its expeditions overseas.

NOW COMES THE HARD PART

Establishing a base, building the military facilities, and deploying the personnel is the easy part. The PRC's Ministry of National Defense indicated that "Xi encouraged them to establish a good image for China's military, and promote international and regional peace and stability."¹³ But the difficult part of managing any overseas presence is obtaining and maintaining the access and privileges required to facilitate the mission of a forward deployed military unit or any a contingency operation. In Kurt Campbell's book, *Pivot: The Future of American Statecraft*, he asserts unequivocally, "there is perhaps nothing so difficult as stationing one's military forces on the sovereign, democratic soil of another country."¹⁴ Many studies allege that China's port investments are intended to capture and control facilities and real estate that will

13. Ben Blanchard, "Promote Peace, Xi Tells Soldiers at First Overseas Base," Reuters, November 3, 2017, <https://www.reuters.com/article/us-china-defence/promote-peace-chinas-xi-tells-soldiers-at-first-overseas-base-idUSKBN1D401U>.

14. Kurt Campbell, *The Pivot: The Future of American Statecraft* (New York: Grand Central Publishing, 2016), 280.

provide exclusive access for the PLA, or at least be used for dual use purposes.¹⁵

Prescient examples include the Hambantota Port in Sri Lanka and concerns of China coercing with the Djiboutian government to gain control of port operations.¹⁶ But nations have sovereign rights to negotiate—and sometimes renegotiate—terms of an agreement, to include a basing agreement. Historically, the biggest threat to basing rights is the internal political and security dynamics of a host nation.

In their RAND report, *Access Granted: Political Challenges to the Overseas Military Presence, 1945–2014*, Stacie L. Pettyjohn and Jennifer Kavanagh point out, “local opposition often emerges organically within nations that permit U.S. forces on their soil, and at times, these internal access threats can force the host nation to restrict or rescind U.S. access.” They identify two types of threats: *internal threats*—a local population challenging a US military presence or US forces’ right to operate from its nation’s territory—and *external threats*—a third party pressuring a host nation to deny, restrict, or rescind US basing rights. Both rely on either organically or externally influenced local indigenous attitudes toward a foreign force presence.¹⁷ Although

15. Christopher D. Yung and Ross Rustici with Scott Devary and Jenny Lin, “Not an Idea We Have to Shun”: *Chinese Overseas Basing Requirements in the 21st Century*, China Strategic Perspectives 7 (Washington, DC: National Defense University Press, 2014), 1.

16. Mark Green, “China’s Debt Diplomacy: How Belt and Road Threatens Countries’ Ability to Achieve Self-Reliance,” *Foreign Policy*, April 25, 2019, <https://foreignpolicy.com/2019/04/25/chinas-debt-diplomacy/>.

17. Stacie L. Pettyjohn and Jennifer Kavanagh, *Access Granted: Political Challenges to the U.S. Overseas Military Presence, 1945–2014* (Santa Monica, CA: RAND Corporation, 2016).

their study focused on the impact these dynamics play on US overseas bases, the same challenges are likely to apply to other countries seeking to build a long-term overseas basing posture.

The PLA is new to establishing bases in another country's sovereign territory under peacetime conditions, and it has not previously secured access to operate from a base in a contingency operation. Extensive security-study literature on the complexity of obtaining access and managing the relationship with a host country is lacking, and the sources that are available did not entail robust research. In contrast, managing relations with a host government and the local community, addressing legal issues, and contracting services from the local economy are likely to consume as much of the time of policy makers and decision makers as making decisions on strategy, posture, training, manning, and equipping.

Accurately ascertaining how China will ensure the security of its interests overseas has been difficult. The PRC's combination of opacity and limited experience makes sufficiently anticipating China's strategic intentions difficult. Thus, the ways in which China will command and control its overseas operations are not apparent. The only glimpse the public has received is the very public demonstration of Xi Jinping's visit (wearing a PLA camouflage uniform) to the PLA Joint Battle Command Center, where he participated in a teleconference with the personnel stationed on the PLA base in Djibouti.¹⁸ This visit demonstrated the Joint Battle Command Center's

18. Tyler Rogoway, "Take a Rare Peek inside China's Expansive Joint Battle Command Center," Drive, November 7, 2017, <https://www.thedrive.com/the-war-zone/15866/take-a-rare-peek-inside-chinas-expansive-joint-battle-command-center>.

ability to communicate across great distances in real time to its people stationed in foreign countries, but did not clarify how the Chinese leaders would control or manage the nuance of fluid dynamics if the Chinese presence were to expand in scale.

THE THREE ENABLERS

Three capabilities critical for assuring base access include foreign-area expertise, legal support, and contracting for local base support. No evidence or significant study is available indicating the way in which the PLA is developing these enabling functions to support overseas basing. Furthermore, illustrating the impact competency has in these areas on managing base access and privileges is difficult because the variables are diverse and belie statistical analysis. Nonetheless, these capabilities are critical enablers that assure mission access and maintain the legitimacy of a forward deployed force occupying a permanent basing facility.

Foreign-Area Expertise

Having individuals on hand—whether they be members of the staff or the actual commander—who have extensive experience in a region or expertise in the language, culture, and local politics of a specific country is an unspoken rule for successfully executing expeditionary operations and managing foreign basing. The language ability and the accompanying cultural aptitude that follows extensive language study, whether acquired through travel or more formal training, are critical when enlisting support from the host government and the local population. More specifically, foreign-area experts can find and

develop the locals—through contacts developed over time via travel or research—who will be able to accentuate the positive impacts brought by the foreign force on the host nation and to diffuse those benefits to the local population. These experts can also assist the commander of forces deployed in the foreign country to mitigate disputes and to deescalate local conflicts through a developed understanding of the local social dynamics and power centers.

The US experience in Iraq and Afghanistan illustrates the importance of this foreign-area knowledge. After the initial invasions and subsequent occupations of both countries, the US military took great pains to train and develop local area expertise. The US Army had already established the Foreign Area Officer Program, which cultivates foreign-area expertise through language training, academic study, and in-country experience. But US commanders in Iraq and Afghanistan quickly recognized the impact local-area expertise had on mission success and how deployed units were critically short. In an effort to foster more expertise quickly in Afghanistan, the US military established the Afghanistan-Pakistan Hands program to build a bench of experts quickly who would rotate in and out of Afghanistan and Pakistan.¹⁹ Additionally, to fill that critical capability gap, all pre-deployment training began to include language and culture training along with the training on the firing range that prepares a unit for its tactical combat mission. This trend continues in other regions where US forces deploy to support exercises and other operations.

19. Mark Lee, "The Afghanistan-Pakistan Hands Program," US Army (website), February 12, 2014, https://www.army.mil/article/115523/the_afghanistan_pakistan_hands_program.

To meet the PLA's needs for foreign expertise, the PLA University of Foreign Languages in Luoyang, Henan Province, is one of the top nine foreign language schools in China.²⁰ The PLA Institute of International Relations in Nanjing also trains officers in foreign languages for the military intelligence sections of various military regions and attaches assigned to its embassies in foreign countries.²¹ China also has many government-affiliated think tanks and universities that study global security, regional affairs, and international relations. China is likely gaining more regional expertise through the diaspora of Chinese citizens who have emigrated from China to support its economic initiatives and to start businesses. But this expertise from academics in China—or the diaspora of Chinese citizens—does not appear to diffuse into the military ranks of the PLA. Members of the PLA have confirmed the army is unprepared for foreign deployments because the members lack the foreign language capability and the cultural aptitude to understand foreign nations, despite the availability of language schools and an expanding contact with foreign people and cultures. This lack of capability and aptitude was anecdotally evident at a People's Armed Police base in Tajikistan when Chinese policemen's tasks between local security forces relied heavily on a Tajik interpreter for some simple tasks at a market

20. Xu Lin, "Top 9 Foreign Language Universities in China," China Internet Information Center, June 13, 2011, http://www.china.org.cn/top10/2011-06/13/content_22772925_3.htm.

21. John Pike, "Second [Intelligence] Program," Federation of American Scientists, April 15, 2000, https://fas.org/irp/world/china/pla/dept_2.htm.

in Murghab, despite occupying the base for “three, four years.”²²

One problem is the PLA appears to largely insulate its operational units and leaders from contact with foreigners. The Office of International Military Cooperation is tasked with managing all international military interaction.²³ If an event does not include a representative from this office, the US military has difficulty attending the event. Even in its leadership structure under the current reforms, the Chinese seemingly seek to insulate their force from foreign interaction. The minister of the PRC’s Ministry of National Defense and a deputy director of the Joint Staff Department of the CMC have a portfolio that includes engagement with foreign military leaders, yet has little influence over operational or strategic decision making. In contrast, their counterparts with operational responsibilities have little contact with foreign leaders. PLA regulations limiting most officers to one international trip per year and restrictions on interactions with foreigners make building relations with foreign officers difficult for PLA officers.²⁴ Some PLA officers can briefly travel overseas as part of their studies at the PLA National Defense University, but they are carefully scheduled and closely monitored on their travel.

22. Gerry Shih, “Central Asia’s Forbidding Highlands.”

23. Yao Jianing, “MND Holds Press Conference on CMC Organ Reshuffle,” Ministry of National Defense of the People’s Republic of China, January 12, 2016, http://eng.mod.gov.cn/TopNews/2016-01/12/content_4636291.htm.

24. Kenneth Allen, Phillip C. Saunders, and John Chen, *Chinese Military Diplomacy, 2003–2016: Trends and Implications* (Washington, DC: National Defense University Press, 2017), 16.

This isolation could be attributed to the Chinese suspicion that outside influences intend to undermine socialist values. Huang Kunming, the head of the Publicity Department of the Communist Party of China, claims “some western countries . . . are trying to seduce people into ‘beautifying the West’ and ‘being compliant with the West,’ weakening or even abandoning their identification with their own spiritual culture,” and that Chinese socialist values must be protected.²⁵ In fact, a key purpose of the new Politics and Law Commission under the PLA is to “keep the troops pure and consolidated.”²⁶ The PLA has expressed concern that contacts with foreign militaries could expose PLA officers to political threats, including Western efforts to promote the idea the PLA should be a national army, rather than loyal to the Communist Party of China. If China is to promote its core socialist values and foster loyalty to the communist party and nationalist pride, it will continue insulating its most vulnerable and impressionable junior soldiers from contact with foreigners, preventing them from gaining a better understanding of world affairs and—most importantly—from acquiring the local expertise for places where the Chinese might build bases.

The point at which the Chinese begin a concerted effort to grow and foster the experts they will need to support a more expeditionary global presence will be apparent. More PLA soldiers will be traveling, studying, and learning foreign languages. In fact, such

25. Ben Blanchard, “China Minister Warns against Seduction of Values by Western Nations,” Reuters, November 16, 2017, <https://www.reuters.com/article/us-china-politics-culture/china-minister-warns-against-seduction-of-values-by-western-nations-idUSKBN1DH0AU>.

26. Yao Jianing, “MND Holds Press Conference.”

an event will clearly mark China's intent to expand basing and, depending on where those PLA personnel travel to experience foreign culture, where personnel will build the new bases.

Legal Support

An expeditionary legal capability is also critical to support forward deployed forces. Legal experts ensure that local units operate within the limits set by international law, PRC national law, or the laws of the host nation. Interpreting law and rectifying disparities between international law and the basis for use of force in an international crisis requires knowledgeable and informed legal expertise in many areas of law. The spectrum of legal issues is extensive and complex. Areas that require a nuanced interpretation and application of law can include intelligence law and interrogation operations, rules of engagement, international agreements, status of force agreements, detainee operations, contingency and deployment contracting, foreign and deployment claim environmental law in operations, administrative law, and military justice in operations.

The PLA has a rich and developed legal culture. Significant studies and commentary abound regarding the Chinese approach to "lawfare," which is a third of the so-called "three warfares."²⁷ But the Chinese have a narrow scope of law and its application in the military and for national security.

27. Peter Mattis, "China's 'Three Warfares' in Perspective," War on the Rocks, January 30, 2018, <https://warontherocks.com/2018/01/chinas-three-warfares-perspective/>.

The Chinese use domestic law to establish a legal precedent as a *casus belli* for military action.²⁸ In effect, the PRC establishes a domestic law to justify the use of force or to claim the legal right to use force under certain circumstances. Two ready examples are the 1992 Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone, which sets out some of China's maritime territorial claims (and justifies PRC efforts to protect those claims in disputes), and the 2005 Anti-Secession Law, which includes justification for the use of force to reunify Taiwan with the mainland. PRC lawmakers lay out a plan to achieve a peaceful reunification, but also the conditions that will require the PRC to compel reunification through force.²⁹ In the territorial sea law, Chinese lawmakers describe the baseline for Chinese land and ambiguous measurements for determining China's sovereign territory and seas.³⁰ Neither law provides for limitations, oversight, or authority signaling intent to exercise restraint or to comply with international norms and standards.

If one is to apply this logic to other areas of Chinese military law, the Law of the People's Republic of China on the Protection of Military Installations, adopted by the Twelfth Session of the Standing Committee of the

28. Larry Wortzel, *The Chinese Liberation Army and Information Warfare* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2014).

29. National People's Congress of the PRC, Anti-Secession Law (3rd Session of the 10th National People's Congress of the PRC, March 14, 2005).

30. National People's Congress of the PRC, Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone (24th Meeting of the Standing Committee of the 7th National People's Congress of the PRC, February 25, 1992).

Seventh National People's Congress on February 23, 1990, highlights this troubling trend.³¹ Article 3 states, "People's governments and military organs at all levels shall, in the interests of national security, jointly protect military installations and safeguard the interests of national defense." Later, in chapter 5 of the law Protection of Military Installations Not Included in the Military Restricted Zones and the Military Administrative Zones," article 21 directs that the units in charge of military installations "shall adopt measures for the protections of the military installations not included in the military restricted zones and the military administrative zones." Without a specific law for overseas bases or any other clarification, one can assume this policy includes military installations outside of China's sovereign territory. These policies are essentially broad directives justifying the use of force; however, the law does not impose a limitation on the measures that a unit may adopt or the caveat that units must defer to international laws of armed conflict or, more importantly, the domestic laws of a host nation. In addition, the laws do not call for the development of status of force agreements.

Reinforcing the directions in the law described above, the counterterrorism law promulgated by the Standing Committee of the National People's Congress in December of 2015 directs that "organizations based abroad shall establish and complete security protection systems and advance response planning,

31. National People's Congress of the PRC, Law of the People's Republic of China on the Protection of Military Installations (2014 Amendment) (12th Session of the Standing Committee of the 7th National People's Congress, February 23, 1990).

and strengthen security protections for relevant personnel and property.”³² The law also dictates,

Personnel that are lawfully equipped with and carry weapons, may use their weapons against persons at the scene in possession of weapons such as guns and knives, or who are using other dangerous methods, who are committing violent acts or are preparing to commit violent acts, where warnings prove ineffective. In emergency situations or where giving a warning might cause a more serious harm, weapons may be used directly.³³

This, in essence, is a broad set of rules for engagement which, if not further refined at the local level, potentially risks the use of excessive force in an effort to provide security to a forward deployed PLA unit. No specific law or direction for developing regulations or guidelines for managing foreign bases is apparent.

The PLA is organized enough to manage military legal affairs to a degree. The PLA court is a parallel structure to the Supreme People’s Court of the PRC under the Politics and Legal Affairs Commission. The PLA organized the military courts under the CMC’s Politics and Law Commission to “help intensify the CMC’s leadership of the military’s political and legal work, deepen the rigorous military governance in accordance with the law, give larger play to the politics and law department, prevent, investigate and deal with criminal activities, and keep the troops pure and consolidated.” Subordinate military courts

32. National People’s Congress of the PRC, Counter-Terrorism Law of the People’s Republic of China (18th Session of the Standing Committee of the 12th National People’s Congress, December 27, 2015).

33. National People’s Congress of the PRC, Counter-Terrorism Law.

are arranged under the theater commands to exercise jurisdiction over military personnel and their families in the areas of criminal, administrative, and civil law. In an article for *The Diplomat*, Susan Finder points out “there is much less transparency in the military legal system than in the civilian legal system.”³⁴ But the Chinese recognize the need to improve the military legal system. Unfortunately, these calls for reform are only focused on the need to train more judges to prosecute crimes and to protect the rights of soldiers.³⁵ Although efforts at prosecutorial reform are admirable to maintain discipline, they will not meet the needs for forces deployed overseas in peacetime or in support of a contingency.

Contracting Support and Procurement

Sun Tzu stated, “The line between disorder and order lies in logistics.” Operational contracting support provides significant benefits and efficiencies to forward deployed forces. Contractors—whether from China, other foreign countries, or the local host population—can provide for a range services, to include local area transportation, construction, janitorial, groundskeeping, food preparation, and any other services that contribute to the comfort of the deployed force and mission success. Contractors can be hired, as the need arises, to free uniformed military from base support tasks in order to conduct operational

34. Susan Finder, “Shoring up the ‘Rule of Law’ in China’s Military,” *Diplomat*, February 4, 2015, <https://thediplomat.com/2015/02/ruling-the-pla-according-to-the-law/>.

35. “比较我国军事法院法官与地方法院法官” [On the status of the judicial committee in criminal proceedings], Docin, January 24, 2014, <http://www.docin.com/p-758693962.html>.

tasks.³⁶ Many of these contractors can be filled by local workers, both building efficiency for logistical support and contributing to the legitimacy and bolstering of local support for the occupying forces.

To realize these efficiencies and the inherent benefits, the military must have experts or trained personnel who are able to procure the goods and services necessary for base support. This requirement calls for personnel who can provide the service, manage and service the contract, handle labor disputes, and ensure those who provide necessary services are paid fairly. If the services are to be procured locally, then ensuring a certain level of quality and safety is important.

A key component of the PLA reform included improving joint logistics capability. On September 13, 2016, China established the Joint Logistics Support Force under the CMC. During the ceremony establishing this new command, President Xi Jinping stated “the Joint Logistics Support Force is the main force to conduct joint logistics support and strategic and operational logistics support.”³⁷ Kevin McCauley, in his testimony before the US-China Economic and Security Review Commission’s hearing China’s Military Reforms and Modernization: Implications for the United States, provided a comprehensive review of the PLA’s joint logistics modernization. Along with developing the ability to provide a strategic delivery

36. Moshe Schwartz and Jennifer Church, *Department of Defense’s Use of Contractors to Support Military Operations: Background, Analysis, and Issues*, CRS Report for Congress 7-5700 (Washington, DC: Congressional Research Service, May 17, 2013).

37. Zhang Tao, ed., “China Establishes Joint Logistic Support Force,” China Military (website), September 13, 2016, http://eng.chinamil.com.cn/view/2016-09/13/content_7256651.htm.

capability that can support combat units and overseas bases, civil-military integration is a key component of the modernization of logistics capability.

The PLA recognizes that outsourcing certain logistics requirements to the private sector creates, “great efficiency, flexibility, and timeliness,” for logistics. But this integration is limited to developing better inventory control and leveraging private sector research for military use. The integration of systems and schemes that would support local contracting for Chinese bases is not apparent in the joint logistics force modernization. McCauley states the Chinese can leverage private Chinese business under the reforms.

IMPACT ON THE PLA

As Mattis indicated, “China should and does have a voice in shaping the international system and all of China’s neighbors have a voice in shaping China’s role.” If China is to continue its global ambitions, foreign bases will most likely be necessary. Obtaining and maintaining base access and operational privileges will require some of the capabilities described above, otherwise, such access can easily be threatened by a miscalculation.³⁸ Without the right systems, legal agreements, and political relationships in place, the very legitimacy of a PLA base could come into question. Basing rights and privileges can be rescinded even if extensive rents, contracts, and operational integration are in place; this is often forgotten, though Pettyjohn and Kavanagh point it out in their study of China’s political challenges to overseas basing.³⁹

38. Pettyjohn and Kavanagh, *Access Granted*.

39. Pettyjohn and Kavanagh, *Access Granted*.

Thus far, no systematic PLA research, as part of PLA modernization efforts on how to answer the challenges that a more persistent global presence will bring, is apparent. Once PLA leaders realize the Chinese military must develop the ability to manage the political dynamics of a host-nation relationship wherever it constructs a base or seeks contingency access, the culture and the perspectives of the PLA will be impacted. China will inevitably need to consider how it will compromise and integrate its forces into the international community. The PLA will have to consider its openness and transparency, as well as the risk of outside influences that could raise questions of loyalty. The potential for an impact on the cultural attitude of the PLA will transform as the force becomes more global.

Empathy

The broad expertise required to manage basing successfully also requires a certain amount of empathy to local conditions and interests. This empathy leads to an understanding that then leads to the ability to better negotiate mutually beneficial outcomes. As these experts seek to align the interests and demands of leaders far removed from the local conditions, their frustration and doubt of PRC principles, policies, and law could engender perspectives that could run counter to PRC's myopically derived narratives for global good.

Political Loyalty

The buffer with which the Chinese attempt to prevent its forces from "being compliant with the West" will cause a schism between the devout patriots

insulated from the daily realities on the ground and those who must accomplish the mission. This dilemma is already captured in popular culture. In the movie *Wolf Warrior 2*, the PLA is stuck in the dilemma to protect the Chinese people or to adhere to the PRC and UN authorization for intervention.⁴⁰ Throughout the movie, the commander of the PLA Navy and the sailors in the combat control center on a ship offshore hover over the trigger to launch a missile, despite disregarding the carnage they are witnessing through constant feed from an unmanned aerial vehicle. Luckily, a former PLA soldier, Leng Feng, who has been living in China and Africa as a trader and not constrained by PRC authority, is willing to go find a Chinese doctor with a cure to a local pandemic and to then secure a Chinese-owned factory. Although this character, played by Chinese actor Wu Jing, is able to operate outside of the PRC principles and rules, he conveniently demonstrates his patriotism in the end by waving Chinese flags and declaring the greatness of China. This friction between dealing with the realities on the ground and remaining loyal to patriotic dogma is one that is inherent in a military that operates globally but is not always so easily rectified.

Conformity to International Rules and Norms

The PLA will be required to compromise and to achieve success in better line with rules and norms. The Chinese will not be able to supplant the local rules or norms every other country observes so easily. Even the PLA will be required to conform in a foreign country, especially if the base is in a more developed

40. *Wolf Warrior 2*, directed by Jing Wu (2017; Plano, TX: Well Go USA, 2017), DVD.

country with a functional government and robust laws and standards.

Increased Transparency of Strategic Intent

If Chinese bases and the PLA presence continue to expand, the actions required for securing access provide a clarity of the PLA's intentions and aspirations. When a PRC state-owned company begins construction on a port or attains a lease to run a port, anxieties and doubts concerning the PRC's intentions emerge. An effort to learn a new language, the negotiation of a status of force agreement, or the signing of new contracts for base support in a foreign country offer clear signals of a nation intent on increasing its profile. These activities may not necessarily be public knowledge, but they are next to impossible to keep secret, especially if the host country insists these items and processes be transparent in an effort to inform its people and prevent corruption. The inevitable result will be a publicly available range of signals and indicators of China's intentions.

CONCLUSION

This study uses the practical questions about obtaining and maintaining base access as a lens through which to raise new questions about China's global ambitions and the PLA's role in securing them. Two things are clear: The PLA is going to continue playing a greater role in ensuring China's interests abroad, and it is not currently prepared to manage the political and security dynamics a greater forward presence and overseas bases will entail. The United States, which has managed a significant global presence since the end of World War II, still struggles

to ensure access to bases in peacetime and during contingencies. Foreign-area specialists, lawyers, and contracting experts mitigate the potential for friction, but when an incident occurs, the guest military needs to have built the political foundations and relationships with the host government and the local community that allow the host and guest to work out meaningful and mutually beneficial solutions. If the PLA does not begin considering how it will manage these dynamics and train officers to help carry out these tasks, it will have difficulty obtaining and maintaining the access necessary to pursue its goals. Though economic leverage is a useful tool, it will not necessarily be sufficient to coerce a host nation and bend local leaders to China's will.

4. THE PEOPLE'S LIBERATION ARMY IN 2018: EDUCATION AND PEOPLE'S WAR

Brian Waidelich and Bernard D. Cole

INTRODUCTION: YEARS OF CHANGE, 2008–18

China's military modernization increased its pace with the growth of the economy that began with Deng Xiaoping. The modernization has been marked by recognition of China's increasing power following the 2008 global economic crisis. The 10 years since have been notable for China's continued economic prosperity and concomitant growth in its military capability. The People's Liberation Army (PLA) modernization has been marked by more state-of-the-art equipment and efforts to ensure its personnel are capable of operating the equipment effectively.

This chapter addresses an important aspect of that emphasis—namely, China's campaign to increase reliance on civilian educational institutions for sourcing PLA personnel. Relying on a civilian educational background for new officers and other personnel does not mean disregarding traditional military sources for PLA personnel, but it recognizes the advantages of a modern personnel system of multiple origins. Both the motivation for this effort and the various associated programs of civilian origin will be discussed.

Thomas Bickford previously argued that the PLA made a "turn to civilian education" around 1999, prior to which the education of Chinese officers and noncommissioned officers (NCOs) had been an "entirely military affair." This "turn" included an effort to recruit more college graduates as officers,

the establishment of a reserve officers' training corps similar to that in the United States, and the development of agreements with civilian universities to have their professors teach at military academies.¹ This chapter provides an updated view of this shift and concludes with a look at how these changes might affect the US and Chinese militaries, now and in the future.

PLA MODERNIZATION AND THE NEED FOR HIGHER-QUALITY PERSONNEL

PLA modernization in the mid-1990s focused primarily on improving materiel and addressing readiness concerns spurred by the US military performance during Operation Desert Shield and Operation Desert Storm in 1990–91, and by the 1996 Taiwan Strait Crisis.

As noted above, however, modernization has increasingly focused on improving personnel performance, including education and training. Programs have been developed, instituted, and changed when deemed appropriate for commissioned officers and NCOs as well as other enlisted personnel.

Historically, the PLA usually commissioned officers directly from its enlisted ranks. But China recognizes that a twenty-first-century military requires officers with stronger educational backgrounds and intellectual potential. Personnel accession now

1. Thomas J. Bickford, "Trends in Education and Training, 1924–2007: From Whampoa to Nanjing Polytechnic," in *The "People" in the PLA: Recruitment, Training, and Education in China's Military*, ed. Roy Kamphausen, Andrew Scobell, and Travis Tanner (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2008), 36–37.

includes an emphasis on candidates with at least high school and, if possible, further education.² This has contributed to recruiting civilian university graduates into officer candidate programs.

The military has been making major efforts to leverage civilian educational resources to produce officers able to deal effectively with force modernization. These efforts also reflect an apparent conclusion that the PLA is by itself unable to develop the high-quality officers needed. As one manual on the PLA's reserve officers' training corps-like program put it, China's civilian universities have "clear advantages" in their inventories of advanced technologies, and, by relying on civilian resources, the military can "patch up" its shortcomings in high-tech talent development.³

Recruiting and educating higher-quality officer and enlisted personnel is highlighted as an important factor in modernizing the PLA. Improving human capital is emphasized as being of equal importance to, if not greater importance to than, fielding new, state-of-the-art equipment. Former Chinese President Jiang Zemin stated, "Though we're unable to develop all high-technology weapons and equipment within a short period of time, we must train qualified personnel first, for we would rather let our qualified personnel

2. "国务院、中央军委《关于建立依托普通高等教育培养军队干部制度的决定》" [State Council and CMC "decision to establish a military cadre cultivation system based on normal higher education institutions"], China National Radio Online, May 30, 2000.

3. Cadre Department of the General Political Department of the PLA, 中国国防生 [China's national defense students] (Beijing: PLA Press, 2007), 7.

wait for the equipment than the other way round.”⁴ Jiang’s successor, Hu Jintao, announced the Two Transformations in 2005, seeking to transform the PLA from “an army preparing to fight local wars under ordinary conditions” to one preparing for “modern high-tech conditions,” as well as from “an army based on quantity to an army based on quality.”⁵

Hu’s Two Transformations emphasized the need for more highly educated and capable officers and enlisted personnel. Mao Zedong’s classic citizen soldier, who could put down his hoe and pick up a rifle, was no longer adequate material from which a proficient modern service man or woman could be molded. Whether draftee or volunteer, the new PLA servicemember must possess both the native intelligence and formal education necessary for maintaining and operating complex systems. More recently, PLA personnel quality has been emphasized in the revival of the bizarre Lei Feng cult.⁶

These requirements for higher-quality personnel came at the same time the PLA was undergoing major personnel cuts and military academic institutions were being reorganized. These changes made it more difficult for the PLA by itself to improve the educational background of officers and enlisted personnel.

4. Dennis J. Blasko, “Technology Determines Tactics: The Relationship between Technology and Doctrine in Chinese Military Thinking,” in *China’s Emergence as a Defense Technological Power*, ed. Tai Ming Cheung (New York: Routledge, 2013), 65.

5. Bickford, “Trends in Education and Training,” 34.

6. See, for example, “Chinese Observe Lei Feng Day by Doing Good Deeds for Others,” *Xinhua*, March 5, 2018, http://www.xinhuanet.com/english/2018-03/05/c_137018287.htm.

Against this backdrop, the Chinese State Council and Central Military Commission (CMC) jointly released a document in 2000 strongly signaling the PLA's "turn to civilian education." The "Decision to establish a military cadre cultivation system based on normal higher education institutions" offered a detailed justification and implementation plan for increasing the use of civilian universities and vocational schools for preparing military officer candidates. The opening paragraph first emphasizes that the PLA is "facing a new situation in which science and technology [are] rapidly developing," which means the PLA must "grasp the initiative" and cultivate "new-type military talent" able to take advantage of this new scientific and technological knowledge.⁷

Ensuring these new officers are "politically excellent" is even more important. Hence, the directive requires reliance on nontraditional commissioning sources to "satisfy the force's requirements for high-quality talent," including "progress in employing . . . normal higher education institutions in national defense and military modernization." This in turn caused the State Council and CMC "to establish a Military Cadre Cultivation System" based on the civilian education system. The inclusion of "political excellence" underlines the leadership's continued concern about the political reliability of the PLA.⁸

The 2000 "Decision" proposed the following four main channels through which the military could garner officer candidates from civilian education institutions.

7. "State Council and CMC 'decision to establish.'"

8. "State Council and CMC 'decision to establish.'"

1. **Reserve Officer Program.** The military establishes cultivation targets among lower-year students in normal higher education institutions, ensuring that as they complete their college studies, they also receive necessary military-political training, and that after they graduate, they are selected to be military cadres.
2. **Direct Recruitment of Graduates.** Among the soon-to-graduate students (including graduate students) of normal higher education institutions and research organizations, high-quality students are selected and received into the force to be military cadres.
3. **Post-Oriented Cultivation.** Normal higher education institutions, according to the targeted student recruitment plans of relevant state and military departments, recruit outstanding graduates from secondary and high schools, ensuring that as they complete their college studies, they carry out necessary military-political training, and that after they graduate, they are assigned to posts that match their skills.
4. **Hybrid Cultivation Programs.** Military and civilian schools jointly cultivate talent and send active-duty cadres to normal higher education institutions for advanced studies.⁹

The PLA has used all four of these officer candidate channels during the past decade. Some have been very small in scale, such as a five-year hybrid cultivation program between Tsinghua University and the PLA Air Force Aviation University to grant concurrent bachelor's degrees and pilot licenses upon graduation.

9. "State Council and CMC 'decision to establish.'"

Though this program began in 2011, it only graduated just over 20 students in 2016. In general, there is a lack of data available about these programs.¹⁰

The National Defense Student (国防生) Program (NDSP), also known as the Reserve Officer (后备军官) Program, has been much more prominent. This program was implemented at civilian universities in the late 1990s and expanded rapidly during the early 2000s, but was canceled in 2017 due to a number of problems that will be addressed below.

New civilian recruitment programs are linked with other plans to improve the quality of the force's officers, notably the Strategic Project for Talented People, which the CMC ordered the PLA to implement in August 2003. This program directed the military to develop by 2023 a cohort of commanding officers who were "capable of directing informationalized wars and of building informationalized armed forces." These commanders were to be supported by staff officers "proficient in planning armed forces building and military operation," supported in turn by scientists "capable of planning and organizing the innovative development of weaponry and equipment and the exploration of key technologies." The immediate goal was to make "a remarkable improvement in the [presumably educational] quality of military personnel" by 2010.¹¹

10. "PLA, Tsinghua Student Pilots Assigned to Air Forces," *Xinhua*, June 19, 2016, http://eng.chinamil.com.cn/view/2016-06/19/content_7220877.htm.

11. State Council of the People's Republic of China, "Revolution in Military Affairs with Chinese Characteristics," in *China's National Defense in 2004* (Beijing: Information Office of the State Council of the People's Republic of China, December 2004).

The PLA also increased measures to use civilian educational institutions to produce NCO candidates. The two main methods for this since the early 2000s have been the direct recruitment of NCOs upon graduation from a civilian college-level institution, or when they take a college entrance examination, after which they must take courses addressing military requirements at partner vocational schools. The Chinese military also adjusted its recruitment policies to raise the maximum age of recruits to increase the pool of soldiers with a civilian post-secondary education.

CIVILIAN SOURCES OF BETTER-EDUCATED CONSCRIPTS

Although China has long recognized the importance of improving the education levels of military personnel, certain systemic issues hampered previous efforts to conscript or recruit college-educated students as entry-level soldiers. For instance, conscription requirements for college students were relaxed under the 1955 Military Service Law of the People's Republic of China (兵役法); the Military Service Law amendment in 1998 expanded this to outright deferment.¹²

Another problem arose from the enlistment ages, 18 to 22, which overlapped with most full-time college-student enrollments, meaning most graduates were too old to enlist. The PLA partially addressed this problem with the release of the 2001 amended

12. Chen Yongfu, Chen Wei, and Yang Zhonghua, “对新形势下大学生征兵工作的几点思考” [Several thoughts on college student conscription work under the new situation], 国防 [National defense] 7 (2017): 70.

Regulations on Conscription Work (2001年《征兵工作条例》), which allowed full-time college students under 22 to leave school for a two-year enlistment, followed by a guaranteed return to their schools.

These problems were further addressed in 2011 amendments to the Military Service Law, which removed the deferment clause and raised the maximum enlisting age to 24.¹³ These changes provided a legal basis for the military to more aggressively recruit soon-to-graduate or recently graduated college students.

Conscription had been an annual winter event, which also created problems, since the PLA was missing the window to conscript most college graduates, who typically signed employment contracts in early autumn following graduation. Hence, peak recruitment was changed in 2013 to late summer–autumn, which better positioned the PLA to recruit recent college graduates and eased difficulties associated with the annual training cycle.¹⁴

The effort to increase personnel accession from civilian sources has made significant progress since 2001. Data from 2001 shows 2,000 college students as the conscription goal; that number reportedly rose to 130,000 in 2009 and 150,000 in 2014. The numbers are not consistent over time, however, as indicated in table 4-1.¹⁵

13. Wang Shumei, *The PLA and Student Recruits: Reforming China's Conscription System* (Stockholm: Institute for Security and Development Policy, January 2015), 6–7.

14. Wang, *PLA and Student Recruits*, 12.

15. Wang, *PLA and Student Recruits*, 5–6.

Table 4-1. Conscription of college-educated students into the PLA, 2001-14

Year	Goal for Recruiting College Students
2001	>2,000
2002	3,000
2003	~2,000
2004	~2,000
2005	~2,000
2006	Not released
2007	Not released
2008	38,000
2009	130,000
2010	>100,000
2011	>100,000
2012	>100,000
2013	~140,000
2014	~150,000

Despite the rising numbers of enlisted college students, there are signs that these students' education may not be meeting the requirements of a modernizing PLA. One sample of newly admitted college student recruits in 2017 contained "basically no graduates of Program 211 and Program 985 universities," generally considered China's top civilian educational institutions.¹⁶

16. Cao Zhigang, "对提升大学生征集比例的'冷思考'" [A "dispassionate look" at increasing the proportion of college student recruitment], 国防 [National defense] 10 (2017): 73.

Furthermore, the Chinese media has recently reported about volunteer enlistees in the PLA who quit prior to their required two years in service, although numbers are not readily available. In a recent case, four male enlisted personnel in Fujian province who were “unhappy with the military’s strict discipline” were each fined 50,000 RMB (approximately \$7,900) after leaving the military early. For three years, these men would also be blacklisted from employment in government or state-owned enterprise jobs, banned from traveling abroad, and prohibited from enrolling in school.¹⁷

One new soldier opined that today’s young people have more choices than just joining the army: “They can enroll in universities, go abroad, or join the workforce.” “The strict regulations in the army” and “the increasing difficulty of securing promotions” are also disincentives, he said. This opinion was published almost simultaneously with a government document calling for an increase in the quality and numbers of university graduates entering the PLA.¹⁸ Recruiting difficulties certainly are not unique to China, but the PLA’s flexibility in responding to them is uncertain.

CIVILIAN SOURCES OF PLA OFFICERS

The PLA is seeking military officer candidates who are studying in or who graduated from

17. Zhao Lei, “Military Quitters Face Heavy Penalties,” *China Daily*, April 9, 2018, <http://www.chinadaily.com.cn/a/201804/09/WS5acac0f9a3105cdcf6516da7.html>.

18. Wang Lianzhang, “People’s Liberation Army Warns of Rise in Dropouts,” *Sixth Tone*, January 26, 2017, <http://www.sixthtone.com/news/1876/peoples-liberation-army-warns-of-rise-in-dropouts>.

university-level institutions and who possess the physical fitness necessary to participate in active military operations. The first requirement emphasizes university students majoring in science, technology, engineering, and mathematics (STEM) subjects, which reflects the oft-repeated emphasis in PLA writings about the future of warfare being characterized by “informatized conditions.” These students in turn are subject to written examinations and oral interviews to assess both their knowledge and political suitability. In addition, these students are subject to written and oral examinations to assess their political knowledge and reliability. These programs have technical requirements similar to US reserve officers’ training corps programs, but the latter are generally unconcerned with candidates’ politics.¹⁹

By 1999, the PLA Navy had established a 2010 goal of accessing at least 40 percent of new officers from civilian universities.²⁰ This was updated and expanded in 2007, when the General Political Department’s Cadre Department established a 2010 goal for the entire PLA that 60 percent or more of its annual officer accessions come from civilian sources.

The PLA’s primary civilian education source program, the NDSP, focused mainly on first- and second-year university students. The program was launched in several Chinese universities in 1999

19. See Justin B. Liang and Sarah K. Snyder, comps., “Colloquium Brief: Exploring the ‘Right Size’ for China’s Military: PLA Missions, Functions, and Organizations,” Strategic Studies Institute, US Army War College Press, February 1, 2007, https://press.armywarcollege.edu/articles_editorials/117/.

20. *Xinhua*, August 17, 1999; and Bernard D. Cole, *The Great Wall at Sea: China’s Navy Enters the 21st Century* (Annapolis, MD: US Naval Institute Press, 2001), 70.

and began expanding rapidly to other schools.²¹ Twenty-six civilian schools were participating in the program by 2001, a number that grew to 118 in 2006, but dropped to 86 in 2012.²² Students in the program received military-political training in addition to their undergraduate coursework. An annual scholarship of 5,000 yuan was offered until 2007, when it was increased to 10,000 yuan.²³ Upon graduation, and pending successful evaluation of their physical and mental fitness, NDSP students either entered the military as cadres or pursued graduate degrees. For example, a 2007 publication listed 45 military educational institutions that accepted NDSP students as master's degree candidates.²⁴

The NDSP apparently was supposed to provide most of the increased input given for 2007. This goal was apparently not met; a 2009 *PLA Daily* article estimated that only approximately 30 percent of the roughly 100,000 graduates joining the officer corps each year came from the NDSP, with the remaining 70 percent coming from military academies or direct

21. Kenneth Allen and Morgan Clemens, *The Recruitment, Education, and Training of PLA Navy Personnel* (Newport, RI: China Maritime Studies Institute, 2014), 7.

22. Zhou Lichun and Wang Ping, “利用MOOC平台推动军官在职培训实现军民融合深度发展的思考” [Thoughts on the use of MOOC platforms to advance deepened civil-military integration development in military officer in-service training], *中国军转民* [Defense industry conversion in China] 2 (2015): 76.

23. Allen and Clemens, *Recruitment, Education, and Training*, 9.

24. Cadre Department of the General Political Department of the PLA, *China's national defense students*, 53.

commissioning.²⁵ Table 4-2 provides the most accurate, available data.²⁶

Table 4-2. Sources of PLA officers

Year	High School Students for PLA and People's Armed Police (PAP) Academies	High School Students for National Defense Students (PLA + PAP)	PAP Academies and National Defense Students	NCOs/ Conscripts into PLA and PAP Academies	Total
2018	12,000			5,500	17,500
2017	12,000			4,800	16,800
2016	14,500	4,700		5,900	25,100
2015	15,700	6,000		5,300	27,000
2014	15,000	5,000	3,800		23,800
2013	No data available				
2012	15,000	8,000		6,000	31,000
2011	20,000	8,000		Included in 20,000	28,000
2010	15,000+2,200 =17,200	6,000+850 =6,850		4,100	28,150
2009	15,000	7,500		7,190	29,690
2008	10,000	10,000			20,000
2007	10,000	11,000			21,000
2006	10,000	10,000		5,000	25,000
2005	20,000	12,000		5,000	37,000
2004	20,000	8,000			28,000

25. Allen and Clemens, *Recruitment, Education, and Training*, 8.

26. Dennis J. Blasko, interview by author, October 1, 2018.

The CMC Training and Administration Department announced the termination of the NDSP in May 2017 and began filling its quota by directly recruiting college graduates.²⁷ Currently enrolled NDSP students were not affected by the change; however, undergraduate students who enrolled in 2016, the last year of NDSP recruitment, could graduate and join the military as cadres as late as 2020.²⁸ Furthermore, starting in 2018, NDSP students in the command track would no longer be able to enroll directly in graduate school; only select technical-track graduates specializing in areas such as joint operations command and network security would be able to begin graduate school immediately, and they would be required to study in military, not civilian, academic institutions.²⁹

One PLA academic, conducting a postmortem analysis of the program in late 2017, identified the following problems:

- poor planning about what kind of reserve officers the military required;

27. Ni Guanghui and Wu Xu, “不再从普通高中毕业生中定向招收国防生” [No longer designating and recruiting national defense students among normal higher education graduates], 人民日报 [People’s daily], May, 30 2017, <http://military.people.com.cn/GB/n1/2017/0530/c1011-29307051.html>.

28. “权威解读 | 2017年军队院校招生政策（附报考指南）” [Authoritative interpretation: 2017 military academic institution recruitment policy], 中国军网 [China military online], May 27, 2016, http://www.81.cn/zggfs/2017-05/27/content_7620087.htm.

29. “权威发布 | 终于来啦！2018年军队研究生招生政策解读” [Authoritative release: It’s finally here! Explanation of 2018 military graduate student recruitment policy], 中国军网 [China military online], October 24, 2017, http://www.81.cn/zggfs/2017-10/24/content_7798539.htm.

- lack of standardization across the cultivation and evaluation process;
- poor feedback mechanisms linking recruiters to the units receiving reserve officers;
- policies that were still at a basic stage after nearly 20 years;
- poor communication between the military and civilian sides at civilian universities;
- lack of sufficient teaching materials, training equipment, and instructors; and
- an emphasis on lectures rather than drills.³⁰

Official Chinese sources have not identified a replacement for the NDSP, but new programs have been discussed in open literature. For example, Jin Nongbin, a staff officer at the central PLA recruitment department, argued in 2016 that China should flip the basic model of the NDSP on its head. Rather than having officer candidates engage in four years of university study followed by a one-year probationary period at military organizations (the “4+1” model), Jin suggested the military could more effectively weed out low performers by having candidates spend their first year at military organizations, after which candidates exhibiting strong capabilities would be sent to study at civilian universities (a “1+4” model). Although this approach might help the PLA make better investments in human capital, China would have to undertake

30. Zhang Xu, “国防生制度调整对后备军官任职教育的启示” [Lessons from the National Defense Student System adjustment for reserve officer in-service education], 继续教育 [Continuing education] 12 (2017): 76–78.

a number of other reforms to build a more effective reserve officer program.³¹

Aside from the NDSP, there has been evidence that a small number of civilian university graduates have been directly commissioned as officers upon graduation, though there is little available information on this approach. Also, civilian university graduates who choose to enlist are later given preferential consideration for promotion to NCO or commissioned officer status.³²

CIVILIAN SOURCES OF NCOS

PLA delegations to the United States in the late 1990s and early 2000s routinely inquired about creating and managing an NCO corps. China took one step toward this goal in 2005, when the CMC issued *Opinions on Strengthening the Noncommissioned Officer Corps*, requiring at least a high school education for NCO candidates. Progress has undoubtedly been made establishing an effective, career-oriented NCO corps, but the degree of success remains largely unknown. The US model requires NCOs to guide and train junior officers, manage enlisted personnel, and serve as the source of practical, professional “know-how” for their respective military units.

31. Jin Nongbin, “大学生士兵培养使用的矛盾问题和对策措施” [Contradictions and countermeasures for college student soldier cultivation and utilization], 国防 [National defense] 5 (2016): 52–54.

32. “全国鼓励大学生应征入伍服义务兵役有关政策” [Relevant policies of the state to encourage college students to enter the military in volunteer service], 全国征兵网 [National recruitment network], March 14, 2014, <https://www.gfbzb.gov.cn/zbbm/zcfg/dxsrw/201403/20140314/819867878.html>.

Three data points raise questions about the PLA's success in building such an NCO corps. The first is anecdotal, from a former US defense attaché who served multiple tours in Beijing. At a PLA conference in Carlisle, Pennsylvania, he noted possible cultural constraints that would prevent commissioned PLA officers, who were more highly educated and came from a higher socioeconomic background than their NCOs, from respecting the NCOs greater practical knowledge and accepting their advice.³³

A senior US NCO delegation that spent several days visiting PLA counterparts in 2008 provided the second point. The senior enlisted personnel from US Pacific Command components concluded that PLA senior NCOs serve more as technicians than leaders.³⁴ Additionally, the Congressional Research Service's 2016 report on the PLA observed, "Compared to other militaries, the PLA has underutilized its non-commissioned officers."³⁵ PLA senior NCOs in 2018 may be expected to serve more as leaders than just technicians, but progress in that direction has been slow.

This goes to the point of NCO candidate qualifications, both practical and educational. NCOs

33. Former US defense attaché to China, interview by the author, October 2007.

34. Senior enlisted US Pacific Command personnel, interview by the author, October 2007.

35. Jim Garamone, "Enlisted Delegation Visits Chinese Counterparts," US Department of Defense, July 11, 2008, <http://archive.defense.gov/news/newsarticle.aspx?id=50476>; and Ian E. Rinehart, *The Chinese Military: Overview and Issues for Congress*, CRS Report No. R44196 (Washington, DC: Congressional Research Service, 2016), <https://fas.org/sgp/crs/row/R44196.pdf>.

historically have been promoted from the enlisted ranks. Now, the PLA wants to improve its NCOs by raising their educational backgrounds, but rapidly promoting new recruits to the NCO rank sacrifices the benefits that accrue from many years of service in the ranks. As noted in a 2008 article, directly recruited NCOs “basically meet the requirements of a specialized technical officer,” but this is different from the experienced NCO’s leadership ability.³⁶

Improving the quality of its NCOs remains a priority for the PLA, which began pilot work on directly recruiting civilian university graduates as NCOs in 2003.³⁷ The PLA General Staff Department began offering “preferential treatment in the selection of non-commissioned officers” in October 2011, with efforts focused on university students in their final year of study, vocational technical school graduates, and students possessing “advanced technical ‘vocational qualifications certificates.’”

In 2012, the PLA made agreements with several vocational schools for the “directed education of directly recruited NCOs.”³⁸ Under this so-called “2.5+0.5” cultivation model, high school graduates under the age of 20 spend two-and-a-half years completing technical studies at civilian vocational schools, where they also take preapproved courses

36. Li Dezhong, Hao Weijie, and Yan Xuehua, “From ‘Skilled Citizens’ to Tactical Soldiers’ – The Reform of Recruiting NCOs from Nonmilitary Departments Has Been Underway for Six Years, So How Are These Directly Recruited NCOs Performing? And Which Problems Need to Be Resolved?” [in Chinese] *PLA Daily*, September 3, 2008, 3.

37. Wang, *PLA and Student Recruits*, 17.

38. Allen and Clemens, *Recruitment, Education, and Training*, 20.

to meet the requirements of specific military units. The final half-year is spent at a military academy or training organization, after which favorably evaluated candidates are assigned to NCO billets.

This 2.5+0.5 NCO cultivation model was reportedly still in an “exploratory phase” in 2018.³⁹ The PLA had signed on slightly less than 50 partner vocational schools as of 2017, but approximately 10,000 NCO candidates were reported to be enrolled at these schools annually.⁴⁰ The number of civilian college graduates recruited as NCOs apparently remains low; for example, only 260 university graduates entered the PLA Navy as NCOs in 2012.⁴¹ Furthermore, the PLA appears to be having trouble integrating directly recruited university students into their new roles as NCOs. Zhao Hengzhi, deputy director of the mobilization department in the former Shenyang Military Region, complained in 2016 that directly recruited NCOs were receiving inadequate training prior to entering the force—as little as two to three months of military training and political education. According to Zhao, too many new NCOs exhibited a poor sense of duty, a lack of military skills, and poor work ethic.⁴²

39. Chen Hailong, Deng Zhiming, and Tong Dapeng, “军民融合式士官人才选拔策略研究” [Research on civil-military integration-style NCO talent selection strategy], 中国军转民 [Defense industry conversion in China] 2 (2018): 71.

40. Chen, Deng, and Tong, “NCO talent selection strategy,” 70.

41. Allen and Clemens, *Recruitment, Education, and Training*, 20.

42. Zhao Hengzhi, “新形势下直招士官工作研究” [Research on the work of directly recruiting NCOs under the new situation], 国防 [National defense] 6 (2016): 70–71.

The drive to create a more capable, professional NCO corps is part of the PLA's campaign to increase the civilian educational level of incoming personnel, formalized in the 2011 amendment to the Military Service Law, which also offered new incentives for college students and graduates to serve as officers in the PLA. These included student loan write-offs, future tuition aid, and officer commissions. See table 4-3 for the basic requirements for PLA enlisted personnel.⁴³

Table 4-3. Basic requirements for PLA enlisted personnel

Recruitment Method	Gender	Age	Annual Timing
Conscription registration (required) (兵役登记)	Male	17-18	January 10 to June 30
Service application (voluntary) (应征报名)	Male	17-24 (high school graduates 17-22; postsecondary graduates 17-24; middle school graduates 18-20)	January 10 - August 5
	Female	17-22	January 10 to August 5
Direct NCO recruitment application (voluntary) (直接招收士官)	Male (unmarried)	Under 24	June 5 to July 10
Post-Oriented NCO Recruitment Application (voluntary) (定向培养士官)	Male (unmarried)	Under 20	June-July (appears to vary by province)

43. "Basic Requirements for PLA Enlisted," National Recruitment Network, n.d., <https://www.gfbzb.gov.cn/bydj/>.

CIVILIANS SERVING IN THE PLA

A strong relationship between the PLA and the civilian population lay at the core of Mao Zedong's vision of military effectiveness, characterized by his argument that "the army must become one with the people so that they see it as their own army."⁴⁴ Civil-military interdependence remains a priority in PLA personnel accession programs. President Jiang Zemin listed "ten categories of [PLA] technical, managerial, and support positions" in 2003 that would be filled with civilians. There also has been linkage between the PLA's modernization drive and its need for highly educated civilian personnel. The 2003 Strategic Project for Talented People permitted hiring "non-active duty" contract workers, who were civilians "hired for specific periods of time to perform service and support tasks in higher headquarters noncombat units, hospitals, schools, etc." The 2003 accessions began working into PLA units in 2006, filling "over 20,000 NCO posts" by the end of the year.⁴⁵

Full authority "to institute a professional corps" of civilians was instituted in 2005.⁴⁶ Civilian numbers further increased in 2005 when a second category of

44. Mao Zedong, "On Protracted War," in *Selected Works of Mao Zedong* (Beijing: People's Publishing House, April 10, 1952), 2:186.

45. See Dennis J. Blasko, "PLA Ground Force Modernization and Mission Diversification: Underway in All Military Regions," in *Right-Sizing the People's Liberation Army: Exploring the Contours of China's Military*, ed. Roy Kamphausen and Andrew Scobell (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2007), 281-374, particularly 298.

46. Kevin Pollpeter and Kenneth W. Allen, eds., *The PLA as Organization v2.0* (Washington, DC: Defense Group, Inc., 2015), 156.

contractors was created “to perform many functions of uniformed PLA active duty personnel;” however, these contractors are “not counted as active duty personnel.”⁴⁷

A 2008 directive followed, calling for “strengthening security of strategic importance,” which included the intention to “deepen reforms in . . . the officers’ professionalization system and *civilian* personnel system . . . for in-depth *civil-military integration* [italics added].”⁴⁸

The search continues for more highly educated civilian personnel to serve the military. The PLA’s General Political Department launched its “first public recruitment of civilian employees” in 2014. Of 7,000 “shortlisted candidates . . . 42 percent . . . hold a master’s degree or above and 33 percent are graduates from key [Chinese] colleges and universities,” creating favorable conditions for the PLA to recruit high-quality talent.⁴⁹ The PLA hired 1,148 of these applicants, all of whom a year later received an “instrument

47. The best—perhaps only—comprehensive explanation of civilians “in” the PLA is Dennis J. Blasko, *The Chinese Army Today: Tradition and Transformation for the 21st Century*, 2nd ed. (New York: Routledge, 2012), 73.

48. He Lei, “Strengthening Security of Strategic Importance,” *China Daily*, June 4, 2018, <http://www.chinadaily.com.cn/a/201806/04/WS5b147d30a31001b82571de48.html>.

49. Yao Jianing, ed., “PLA Deploys Recruitment Interview Work for Civilian Employees,” China Military Online, March 18, 2014, http://eng.mod.gov.cn/DefenseEducation/2014-03/18/content_4550195.htm.

of ratification [which] is an essential credential for civilian employees.”⁵⁰

A 2017 source cited that over 20,000 contract civilians are employed throughout the PLA.⁵¹ Of note, civilians being recruited for positions at military academies were being hired only as teaching assistants (助教) or lecturers (讲师), which are low-ranking positions in the teaching hierarchy.⁵² Higher-ranked, higher-paid teaching positions apparently continue to be held by active-duty military personnel. Indeed, another author writing in 2017 noted that many civilian personnel work in entry- to mid-level billets, but very few work in senior-level positions.⁵³ Possible reasons include the novelty of hiring civilian personnel, a budgetary preference for hiring at the entry level, and the increased credibility in the classroom of more experienced military instructors.

50. Guo Renjie, ed., “PLA Issues Instruments of Ratification of Civilian Employees First Time,” China Military Online, February 6, 2015, http://english.chinamil.com.cn/news-channels/china-military-news/2015-02/06/content_6344281.htm.

51. Mao Saiqun, “军队院校非现役文职人员的作用及管理” [The use and management of non-active-duty civilian personnel in military educational institutions], 海军工程大学学报 (综合版) [Journal of Naval University of Engineering (comprehensive edition)] 14, no. 4 (December 2017): 79.

52. “全军首次面向社会公开招考文职人员岗位计划” [Billet plan for the first time whole military opens to society for recruiting of civilian personnel], 军队人才网 [Military talent net], July 10, 2018, http://www.81rc.mil.cn/news/2018-07/10/content_8085464.htm.

53. Ma Jianchang, “增强军队文职人员职业吸引力的对策思考” [Thoughts on strategies for increasing the attractiveness of civilian personnel careers in the military], 西安政治学院学报 [Journal of Xi’an Politics Institute] 30, no. 1 (February 2017): 65.

The CMC's Political Work Department issued a circular in July 2018 to promote military-civilian relations across the country, urging "local governments and PLA units to organize educational activities" to remind both civilian and military personnel of the importance to the PLA of maintaining close ties with the civilian population. Local authorities were also directed to accelerate the establishment of military-civilian coordination mechanisms.⁵⁴

PLA authors have highlighted problems the PLA has experienced retaining qualified civilian personnel for more than a few years, especially in military academies. As one author notes, recent civilian hires, particularly those with doctoral degrees, are "much more likely" to drop out of jobs at military academies than those who are employed at civilian universities.⁵⁵ As one author argues, poor retention may be due particularly to the salaries of civilian employees being significantly lower than those of their active-duty counterparts, few civilians being hired for senior-level positions, and poor access to continuing education and promotions.⁵⁶

In 2017 the CMC and State Council revised the Regulation on the Civilian Staff of the Chinese People's

54. Li Jiayao, "China Strengthens Military-Civilian Relations Ahead of Army Day," Xinhuanet, July 21, 2018, http://eng.chinamil.com.cn/view/2018-07/21/content_8095419.htm.

55. Bickford, "Trends in Education and Training," 37; and Wang Yang, "军队院校文职人员离职现象的回顾与反思" [Reflections and thoughts on the phenomenon of civilian personnel leaving posts at military academies], *经济研究导刊* [Economic research guide] 10 (2018): 146-47.

56. For example, see Ma Jianchang, "Thoughts on strategies," 64-66; and Mao Saiqun, "Use and management," 78-81.

Liberation Army, addressing many of the problems mentioned by military authors.⁵⁷ The new regulations include more detailed language on the grade and promotion structure for management-oriented and technically oriented civilian personnel, likely as part of a move to increase confidence in long-term career prospects.

The 2017 revision also notes that follow-on regulations would address active-duty personnel who are demobilized and then assume employment as PLA civilian employees. For instance, 112 former active-duty officers took civilian posts in the Zhejiang Military District alone in August 2018.⁵⁸ How many active-duty personnel may be demobilized in this fashion is unknown, and it begs the question of how many civilian personnel hired by the PLA previously served as officers. An increasing reliance on civilian members of China's military effort clearly is implied in the current goal of reducing PLA officers by 30 percent.⁵⁹

PLA employment of civilian members is part of a reinvigorated campaign for the military to take advantage of civilian technology and research through "civil-military fusion." Xi Jinping emphasized his aim

57. "中国人民解放军文职人员条例" [PLA civilian personnel regulations], 中国政府网 [China government online], November 10, 2017, http://www.81rc.mil.cn/Civilianpost/2015-10/08/content_6712456.htm.

58. "现役军官转改文职人员陆续换装" [One after another, active-duty officers change uniforms to that of civilian personnel], 军事报道 [Military report], August 4, 2018, 19:04-19:36.

59. "China Focus: Marking 91st birthday, PLA Marches into New Era of Reform, Capacity Building," *Xinhua*, August 1, 2018, http://www.xinhuanet.com/english/2018-08/01/c_137361915.htm.

to “bake” civilian technological progress into PLA advances, including developing close military ties with private research institutes, when he chaired the third meeting of the Central Commission for Integrated Military and Civilian Development on March 2, 2018.⁶⁰

Even more recently, in summer 2018, the PLA announced a new recruiting program to hire 9,297 civilian personnel who possessed the “professional knowledge to serve in key positions.” The program sought personnel who “work in management or professional technical posts but are not in active service . . . but work in active service if necessary.”⁶¹ Of these personnel, 3,728 (40.1 percent) were slated for PLA academic institutions and 2,328 (25 percent) were slated to serve as instructors.

At the Ministry of National Defense of the People’s Republic of China’s regular press conference on July 26, 2018, a spokesman cited “the reform of civilian staff” as a “major achievement” dedicated to “remolding Chinese military strength” as well as “freeing our

60. Lorand Laskai, “Civil-Military Fusion and the PLA’s Pursuit of Dominance in Emerging Technologies,” *China Brief* 18, no. 6 (April 9, 2018), <https://jamestown.org/program/civil-military-fusion-and-the-plas-pursuit-of-dominance-in-emerging-technologies/>, credits Deng Xiaoping with originating the idea of merging the civilian and military research sectors.

61. Huang Panyu, “Chinese Military Begins Recruiting ‘Civilian Personnel,’” Xinhuanet, July 12, 2018, http://eng.chinamil.com.cn/view/2018-07/12/content_8087282.htm; and “China: Recruiting Poster for Civilian Personnel of the People’s Liberation Army,” China Military Online, July 11, 2018 (poster removed from website).

officers and men from non-combat positions.”⁶² In March 2019, PLA media stated the first round of this new recruiting effort had been completed successfully. But only “around 5,700 civilian personnel” had been recruited, suggesting the PLA fell short of its original target of filling over 9,000 civilian personnel billets.⁶³ Going forward, it will be worth watching to see whether PLA writings discuss lessons learned and propose adjustments for improving the future recruitment of civilian personnel.

HOW DO THE CHANGES AFFECT THE PLA, NOW AND IN THE FUTURE?

“Will a candidate who graduates from a military academy be a better officer than one who receives a commission after graduating from a civilian institution” is a question that cannot be answered with any degree of fidelity.⁶⁴ The degree of influence of a civilian versus a military education background for a PLA officer is no less difficult to evaluate than

62. Ren Guoqiang, SRCOL (PLA), “Defense Ministry’s Regular Press Conference” (press conference, Beijing, July 26, 2018), http://eng.mod.gov.cn/news/2018-07/26/content_4820784.htm.

63. “Chinese Military Completes First Public Civilian Personnel Recruitment,” China Military Online, March 7, 2019, http://eng.chinamil.com.cn/view/2019-03/07/content_9443845.htm.

64. The opinion of one of the authors, who served 30 years in the US Navy with officers from various commissioning sources (academy, reserve officers’ training corps, officer candidate school, limited duty officers, direct commissioning from enlisted ranks, warrant officers, and interservice transfers), is that the source makes no difference. But the issue of political reliability may lead to a different view in the PLA.

it would be for an officer in the US military. But for the Communist Party of China (CPC) and the PLA, a particular concern is whether an academic or civilian education instills more or less political reliability.

The CPC still values commissioning officers from military and academy sources. Concern about political reliability in the officer corps plays a role in widening the source and educational background of new officers. Political indoctrination is easier to instill at a military academy than at civilian universities, which are geographically separated and offer widely varying academic programs and environments. But military cliquism may more easily begin among cadets and midshipmen while they are academy students; officer candidates from civilian educational institutions are much more likely to come from a heterogeneous background.

The PLA also is making greater efforts to use civilian vocational institutions as a source of incoming NCOs who lack previous military experience. This program has been expanding since 2012, when the NDSP already was in decline, so it will be worth watching to see whether the 2.5+0.5 program at civilian vocational schools encounters problems similar to those that plagued the NDSP. There are already signs in PLA writings of this possibility, such as a 2018 article stating the PLA has not yet drafted detailed guidelines for military supervision of the 2.5+0.5 program at civilian vocational schools.⁶⁵

Another change has been the degree to which personnel enlisted from civilian educational institutions are being assigned to NCO and officer

65. Chen, Deng, and Tong, "NCO talent selection strategy," 71.

billets. The PLA has introduced new policies to encourage enlisted personnel with some postsecondary civilian education to become NCOs or commissioned officers, but these appear to have not been very successful; less than 20 percent of enlisted personnel with college degrees were selected as NCOs in 2015.⁶⁶ Soldiers with a college education who do not receive commissions apparently do not want to serve as career NCOs in the PLA.

Another element in the CPC's view of PLA officer quality may result from military leaders not having an unblemished reputation for political reliability. For instance, the Chinese Civil War period, particularly the 1930s and 1940s, saw more than one instance of power struggles among CPC and PLA leaders. Second, in early 1950, Mao apparently overruled his PLA commanders when he postponed—effectively canceling—the planned assault on Taiwan to move troops north to the North Korean border. Third, that conflict was followed by Mao deposing and punishing his erstwhile military commander, Peng Dehuai, apparently for “speaking truth to power.” A fourth example is the problematic PLA performance in 1979 against the Vietnamese military, followed by Deng Xiaoping's admonishing the military and instituting reforms. Fifth, the 2001 Hainan Island incident involving Chinese and US aircraft demonstrated a degree of PLA incompetence, and may have featured military leaders lying to their political masters. Most recently, Xi Jinping's anti-corruption drive has included notable attacks on senior PLA officers. Concerns about PLA reliability and loyalty are also reflected in the force's self-evaluations of warfighting

66. Jin, “Contradictions and countermeasures,” 53.

capability. For example, the “Three Whethers” (三个能不能), a recently employed self-critical slogan, questions whether the PLA can maintain party leadership, whether it can fight victoriously when needed, and whether commanders can effectively lead forces and command during wartime.⁶⁷

China’s leaders apparently think the PLA will be strengthened by increased numbers of new officers commissioned from civilian academic institutions who have the STEM knowledge necessary to perform effectively on today’s increasingly technology-intensive battlefield. Grunts and deck seamen will always be essential to military operations, but more and more important are the officers and enlisted personnel who can effectively operate complex equipment and systems.

Termination of the four-year NDSP signals a lack of satisfaction with one attempt to increase the STEM education of newly minted military officers. That goal remains important, however, there is little doubt China will be able to increase the presence of such educated officers and enlisted personnel, which should enhance PLA capabilities.

The PLA is also concerned with ensuring such personnel receive the degree of political education required by the CPC to ensure “political reliability.” As the late Ellis Joffe once stated, there is no reason why a PLA officer cannot be both professionally competent and politically reliable. At some point, however, a threshold may arise where a decision has

67. For more on the Three Whethers and other PLA self-evaluations, see Dennis J. Blasko, “PLA Weaknesses and Xi’s Concerns About PLA Capabilities” (testimony before the US-China Economic and Security Review Commission, Washington, DC, February 7, 2019).

to be made between increased political education and increased technical learning and training.

The increased emphasis on acquiring officers with an enhanced STEM background to use new military systems more effectively should contribute to the PLA's operational effectiveness. The point is not simply to increase the number of officers with STEM degrees from either civilian or military educational institutions, but to commission STEM-educated officers, as well as lower-ranking personnel, able to use their knowledge on the battlefield, not in a classroom or laboratory.

But not all senior PLA officers may support further integration of civilian resources into the military. Some military leaders may prefer the status quo or less integration with civilian institutions. Sources cite a number of concerns, including civilians' lack of knowledge of military affairs, the amount of time needed to get civilians oriented with military ways of thinking and discipline, and concerns about secrecy and "subversive thinking."⁶⁸

The decision to integrate the military and civilian sectors rests with Xi Jinping, who declared in 2015 that civil-military integration, which formerly had only been an area of interest at the national level, was now a national strategy.⁶⁹ This undoubtedly induced the military to find ways to implement the strategy. Several papers since authored by PLA academics have pointed toward programs like the direct recruitment

68. Mao, "Use and management," 79–81.

69. Cao Zhi et al., "习近平的两会时间（十）：系统阐述军民融合发展的三个看点" [Xi Jinping's time at the two sessions (ten): Systematically setting forth three views on civil-military integration development], *Xinhua*, March 12, 2015, http://www.xinhuanet.com/politics/2015lh/2015-03/12/c_1114623628.htm.

of NCOs from civilian schools as being the result of Xi's strategy, although the program existed before he took office in 2012. NDU professor Gong Fangbin reported that "120,000 graduates have directly joined the PLA as [NCOs]—the first direct recruitment of this kind from college graduates."⁷⁰ As long as civil-military integration is a priority item at the national level, the PLA will be expected to make it happen, including the civilian education of a number of officer and NCO candidates.

Some PLA analysts expect economic advantages to arise from the shift to civilian-sector education, a thought expressed in China's 2004 defense white paper, in which the Strategic Project for Talented People goals were described as including "[devoting the PLA] to improving the level of scientific management and achieving a higher overall cost-effectiveness in military expenditure so as to modernize the armed forces with *less input and better results* [italics added]."⁷¹

A 2015 PLA publication estimated the average cost of educating a four-year undergraduate at a military academy at 100,400 RMB, compared to the cost at a civilian university of only 40,000 to 60,000 RMB.⁷² Other sources indicate a preference for the

70. We are grateful to Dennis Blasko for referring us to several references concerning the direct recruitment of college graduates as NCOs as early as 2002; see in particular Ma Haiyan's August 31, 2009, *China News Agency* report.

71. State Council of the People's Republic of China, *China's National Defense in 2004* (Beijing: Information Office of the State Council of the People's Republic of China, December 2004).

72. Su Yuyao, "军民融合人才培养战略"为啥成为代表委员"必谈话题?" [Why has "civil-military talent cultivation strategy" become a "must-discuss topic" among representatives?], 中国军网 [China military online], March 14, 2017, http://www.81.cn/byyd/2017-03/14/content_7526113.htm.

wide variety of technical majors offered by civilian institutions. One metaphor used in this regard is the need to go from the military's "small circle" to the "big market" of the civilian sector.⁷³ "People's War" has not been consigned to history's dust heap, but it has been modernized to emphasize a specific part of the population who contributes directly to the twenty-first-century PLA.

HOW DO THE CHANGES AFFECT THE UNITED STATES, NOW AND IN THE FUTURE?

The degree to which the PLA officer corps and NCO corps are manned by graduates of civilian rather than military educational institutions may be of little direct concern to the United States in 2020, but how that sourcing affects the efficiency of the PLA is of direct concern, now and in the future. The central point is the effect of recent and ongoing changes in personnel accession on the PLA's capabilities across the spectrum of military operations, from peacetime humanitarian assistance to combat operations against the United States and its allies. That in turn is a major element in defining China's power on the world stage.

This capability is indeed vital to crises and potential conflicts over the East and South China Seas and Taiwan. None of these three geographic issues are as important to the United States as they are to China, but they concern important US treaties, allies, friends, and, perhaps more importantly though more difficult to delineate, the US role and capability as a leading global power.

73. Wang Liancheng, "军民融合 人才为先" [In civil-military integration, talent is first], *PLA daily*, July 3, 2017, http://www.81.cn/jfjbmap/content/2017-07/03/content_181423.htm.

The US military has been at war since fall 1990. More than a quarter-century of near-constant, high-tempo operations has taken an unplanned toll on equipment and personnel. This means that despite a defense budget that dwarfs China's, the US military's ability to confront the PLA in East Asia scenarios successfully is problematic. Hence, any steps China takes to improve its military capabilities in twenty-first-century warfare should be an issue of concern to the United States.

China's military capability against that of the United States is not a zero-sum calculation, but perceptions of that balance perforce exist, especially as East Asian nations witness the growth of China. US officials currently emphasize the need for the US military to field the capability to fight a conventional near-peer competitor, particularly China, which could in time lead to a second Cold War against a twenty-first-century PLA manned by increasingly competent personnel.

CONCLUSION

China's multi-decade military modernization program reached a significant milestone in 2015. Changes included a thorough reorganization, technological advances, and equipment modernization, as well as the doctrinal revision to more accurately reflect the kinds of wars the PLA expects to fight in the future.

Beijing has indicated 2020 as the completion date for the current round of PLA modernization, a probably unattainable date for the full reorganization and modernization of China's armed forces. But the administrative changes, including new and modified organizations, should be completed by that year, when

Beijing no doubt will announce the PLA has “finished mechanization of all forces and made important progress in incorporating information and computer technology” and established “a solid foundation for the PLA to become a world-class military force.”⁷⁴ But if this announcement is made in late 2020 or early 2021, it will be problematic.

PLA modernization includes both equipment, from small arms to intercontinental ballistic missiles, and the improvement of PLA personnel quality and capabilities. The latter, though not as newsworthy as new hardware, is arguably the most important aspect of military modernization. Operating new equipment requires new education and training paradigms; employing the new equipment requires new doctrine and tactics. These requirements fit within China’s long-standing recognition of its military personnel’s vital role in defending the nation and securing the CPC’s position in power—hence, the recognition that modernizing the system of military academies is important but not adequate to provide the personnel resources necessary for the new, twenty-first-century PLA. China’s civilian education system offers a way to improve and expand those resources.

Efforts to increase the role of civilian education for PLA candidates have apparently not all been successful, as evidenced by the cancelation of the four-year NDSP, but in toto they are raising the educational level of incoming servicemembers. Following the combined efforts of military and civilian educational institutions since the PLA’s “turn to civilian education” in the late 1990s, 80 percent of the PLA’s officers had

74. “China Aims to Complete Military Reform by 2020,” *China Daily*, May 13, 2016, https://www.chinadaily.com.cn/china/2016-05/13/content_25245704.htm.

four years of higher education by 2010, compared to just 25.8 percent in 1998.⁷⁵ The authors acknowledge the possibility that the NDSP's cancelation could have been the result of factors other than program mismanagement and the poor quality of program graduates. For example, the PLA may have judged the program was successful in creating specialists who would be better suited to the NCO corps than to the officer corps, but the authors did not observe this reasoning in related Chinese writings.

Though some statistics point toward success, Chinese writings have enumerated a number of challenges the PLA continues to face in the course of integrating civilian resources into officer and enlisted education. Recent adjustments to several programs appear aimed at overcoming these challenges, but they also raise a number of unanswered questions. For instance, as a result of the PLA canceling the NDSP and announcing it would shift to the direct recruitment of college graduates, what sort of onboarding program will be put in place to prepare civilian college graduates for their initial officer billets? How long will such a program last, where will it be held, and how will the PLA assess when civilian graduates are ready? Will the process of direct recruitment be able to overcome past complaints that civilian graduates lack proper fighting spirit, have poor leadership skills, do not integrate well with soldiers from different

75. "Defense Minister Says China Has 510,000 in Military Reserves," People's Daily Online, December 29, 2010, <http://en.people.cn/90001/90776/90786/7245072.html>.

backgrounds, and are unwilling to “eat bitterness” that is part of military life?⁷⁶

For enlisted personnel, the degree to which the technical skills of NCOs directly recruited from civilian educational institutions match up with the skills required in PLA units appears to be an area of concern.⁷⁷ Furthermore, the degree to which civilian college-educated conscripts can be incentivized to stay in the military after their required two years of service is another sticking point.⁷⁸ The PLA may have to increase incentives to keep these highly desirable conscripts on as NCOs or officers.

Finally, past Chinese writings have highlighted issues with the retention of civilian instructors at military academies due to a number of factors, including comparatively low salaries, lack of ability to socialize with military colleagues, and an unclear path to promotion. Recently reformed regulations for civilian personnel employed in the PLA appear aimed at remedying a number of these issues, and whether these reforms are effective will be something to watch for in future Chinese reporting.⁷⁹

Even if the PLA is able to overcome the abovementioned difficulties, the success of efforts to improve the education of military personnel may well

76. He Zongfa, Dong Jinhai, and Wang Zhanhe, “对进一步提高国防生选拔培养质量的几点思考” [Some thoughts on further improving the quality of national defense student selection and training], *教学研究* [Research in teaching] 31, no. 3 (2008): 211-12.

77. Zhao, “Directly recruiting NCOs,” 70-71.

78. Jin, “Contradictions and countermeasures,” 52-53.

79. “中国人民解放军文职人员条例” [PLA civilian personnel regulations (2017 revision)], 中国政府网 [China government online], November 10, 2017, http://www.gov.cn/zhengce/content/2017-11/10/content_5238592.htm.

founder on the rocks of a future economic downturn or Beijing's failure to change the direction of the country's demographic decline. Another indirect and even indistinct problem may well continue to be the cultural aversion in China to military service, captured in the classic Chinese saying, "As one does not use good iron to make nails, one does not use good men as soldiers."⁸⁰

Xi Jinping offered the bottom line in the PLA's search for more highly educated, STEM-competent personnel in his July 2, 2017, comment that "[i]t takes first-class military talent, theory, and science and technology to build the PLA into a world-leading military . . . Science and technology is [sic] the core fighting capacity in modern warfare."⁸¹ More recently, in May 2018, Xi highlighted the need "to build China into a world leader in science and technology," which echoes his call to make the PLA "a world-class military by mid-century."⁸²

80. June Teufel Dreyer, *Middle Kingdom and Empire of the Rising Sun: Sino-Japanese Relations, Past and Present* (New York: Oxford University Press, 2016).

81. Zhang Hui, "Reshuffle of Chinese Military Academies Aims to Bring Institutions Closer to Real Combat: Experts," *Global Times*, July 20, 2017, <http://www.globaltimes.cn/content/1057335.shtml>.

82. Zhang Tao, ed., "China Aims to Complete Military Reform by 2020," *Xinhua*, May 13, 2016, http://english.chinamil.com.cn/news-channels/2016-05/13/content_7052671.htm.

**EDUCATION AND
CIVIL-MILITARY RELATIONS**

5. CHANGES IN THE PLA'S MILITARY EDUCATION

Kenneth Allen and Brendan Mulvaney

In his report to the 19th CPC National Congress, Xi Jinping, general secretary of the CPC Central Committee and the nation's president, pledged to make sure that by 2020, the PLA will basically achieve its mechanization, make big strides in informatization, and gain substantial improvement in strategic capabilities. He also set a midterm goal for the Chinese military—to turn itself into a modernized power by 2035—as well as a long-term one—to become a top-tier military by 2050.¹

In March 2016, Xi Jinping stressed that “to achieve the goal of strengthening the military and building a world-class army, the construction of China's military academic institutions must have a major strengthening . . . which includes actively promoting reform and innovation in academic institutions, and constantly improving the level of education for the realization of the Chinese dream.”²

As seen by these two declarations, Xi Jinping makes a direct connection between improving the quality of education and training in the Communist Party of China's armed wing, the People's Liberation Army (PLA), and his signature goal of “realizing the

1. Zhao Lei, “PLA to Be World-Class Force by 2050,” *China Daily*, updated October 27, 2017, https://www.chinadaily.com.cn/china/2017-10/27/content_33756453.htm.

2. “习近平：为实现中国梦强军梦提供人才和智力支持” [Xi Jinping: Providing talent and intellectual support for realizing China's dream of strong military dreams], *Xinhuanet*, March 23, 2016, http://www.xinhuanet.com/politics/2016-03/23/c_1118422270.htm.

China Dream,” of which a world-class military is an integral part. Although the PLA’s military education system has undergone major changes over the past two decades, the pace of this change has quickened since Xi Jinping took office in 2012. These changes have occurred in parallel with the dramatic change in the overall education situation throughout China.

Although there are likely several reasons for the emphasis on redesigning the PLA educational system, one primary driver appears to be linked back to the time when China began receiving high-technology, sophisticated weapon systems in the 1990s, such as Su-27 fighters, *Sovremenny*-class submarines, and surface-to-air missiles from Russia, and started to produce next-generation weapon systems within China. President Jiang Zemin concluded the PLA was not recruiting, educating, and training officers who were qualified to operate or support the new weapon systems, nor was the PLA enlisted force, the core of which revolved around ninth-grade graduates who could only serve for a maximum of 16 years, qualified to support the new systems. As such, in 1999, Jiang completely reformed the officer academic institution structure, reduced the number of institutions, and created a 30-year enlisted force.

At the same time the PLA created the National Defense Student Program. Xi Jinping also created a 30-year noncommissioned officer (NCO) program; however, it was still based on conscripting ninth-grade students and high school graduates. In 2009, the PLA completely revised its conscription and recruitment process for enlisted personnel and focused on recruiting civilian college and graduate students; however, even this program was revised again in 2013. In 2017, Xi made yet another major change to the entire

officer academic institution structure by reducing the number of academic institutions and abolishing the National Defense Student Program. The obvious reason is the exiting program was not producing the desired results of recruiting, educating, and training qualified officers to operate and support even higher-technology weapon systems and equipment.

This aspect only continues to grow in importance, as the PLA shifts from being a ground force-dominated, territorial defense-focused military to a joint and outward-facing force. No longer can you rely on 16-year-old boys from the rural areas with a ninth-grade education to form the bulk of your force. Modern platforms, weapons, communications, and ways of war demand a greater degree of training and education. This is particularly true of the new domains of war, specifically space and cyber, on which the People's Republic of China has placed an even greater emphasis, as evidenced by the creation of the Strategic Support Force (PLASSF).

This chapter discusses how the Communist Party of China thinks about education for the PLA, the categories of education, and the organization and institutions providing that training and education. It will only address the education within the PLA academic institution system, and not PLA programs involving civilian academic institutions, including the National Defense Student Program, and study abroad.

Next, it details the PLA education system, which traditionally has focused on officers; however, with the PLA's growing realization that NCOs play an increasingly important role in a modern military, the PLA is paying increased attention to the inclusion of NCOs in this system, though it still pays much more attention to the inclusion of the officer corps. Of note,

in the PLA, “officer” (军官) and “cadre” (干部) are synonymous. This chapter only uses “officer,” unless “cadre” is contained in the official name of a book. Finally, we offer an explanatory example: PLA Air Force (PLAAF) commanding officers.

Although there has been considerable work by the Communist Party of China to strengthen its control over and indoctrination of the PLA, particularly since Xi Jinping came into power, the political education aspects of the PLA education system are outside the bounds of this chapter, and merit discussion in their own right.

DISTINCTION OF CHINESE TERMS

For comparison purposes, in the US military the term “professional military education” encompasses a range of courses designed for officers and enlisted personnel throughout their careers.³ But it is important to consider the issue of PLA military education from the Chinese perspective, rather than through the lens of the US system. Specifically, US professional military education includes pre-commissioning education for officers, but does not include education at civilian academic institutions in residence or by correspondence.

The PLA does not use the term “professional military education.” The closest term used for this foreign concept is *peiyang xunlian* (培养训练) or just *peixun* (培训), which the PLA translates as “cultivation and training,”

3. Joint Staff, *Enlisted Professional Military Education Policy*, Chairman of the Joint Chiefs of Staff Instruction 1805.01B (Washington, DC: Joint Staff, May 2015).

“development and training,” or just “training.”⁴ At times they also use *junshi jiaoyu* (军事教育), which is translated as “military education,” or *junshi zhiye jiaoyu* (军事职业教育), which translates as “military professional education” or “education of military profession.”⁵ These terms refer to the education and training required for NCOs and officers to move up their career ladders. This includes billet training as well as an understanding of theory and technical issues. For the purposes of this chapter, the term “military education” or just “education” will be used.

The PLA defines “military professional education” as “education outside of military academic

4. “Cultivation and training,” in 军事训练 中国军事百科全书 [Military training volume of China military encyclopedia, 2nd edition] (Beijing: Encyclopedia of China Publishing House, June 2006), 563–64; “培训” [Development and training], in 中国人民解放军军语 [PLA military terminology] (Beijing: Academy of Military Science Press, December 2011), 323; and “培训” [Training], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 223.

5. Chinese Ministry of National Defense, 中国的军事战略 [China’s military strategy] (white paper, Chinese Ministry of National Defense, May 26, 2015); and “军事职业教育” [Education of military profession], in *Dictionary of Modern Military Education* [sic] [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 89–90.

institutions.”⁶ Under this concept, the PLA system offers continuous education, including mostly Internet-based, long-distance learning, to all PLA personnel. It also includes the National Defense Student undergraduate and graduate program, as well as some graduate programs at civilian academic institutions for certain officers. In other words, it does not involve education within the PLA academic institutions discussed in this chapter.

The PLA also uses the terms *xueli jiaoyu* (学历教育) and *renzhi jiaoyu* (任职教育), which it translates as follows (though it is not consistent in how it translates each term).

- *Xueli jiaoyu* is translated as “academic credential education,” “academic education,” or “education of officer candidates for academic credentials, which offers undergraduate education for pre-commissioned officers and graduate education for officers” in military

6. “划重点！军事职业教育与你我息息相关” [Focus on the key! Military professional education is closely related to you and me], *Xinhua*, March 1, 2018, http://www.xinhuanet.com/mil/2018-03/01/c_129819877.htm; and Ni Hai, Xu You, and Li Xiaoliang, “军事职业教育：与你我息息相关—军委机关有关部门专家解读我军军事职业教育” [Military vocational education: Closely related to you and me—Interpretation of the military professional education of our army by experts from relevant departments of the Military Commission], *Jiefangjun Bao*, March 1, 2018, http://www.81.cn/jfjbmap/content/2018-03/01/content_200638.htm.

academic institutions.⁷ In other words, this is the basic education component for theory, such as that which is received for four years at the Aviation University of the Air Force.

- *Renzhi Jiaoyu* is translated as “professional education in military academic institutions” and “preassignment education,” which consists of basic-, intermediate-, and advanced-level officer institutions and NCO schools and offers preassignment training and rotational training for active-duty officers and NCOs at each level (basic, intermediate, and advanced) of their career before they assume their billets. It is also translated as “vocational education.”⁸ For the purposes of this chapter, it is identified as “preassignment education.” Some preassignment educational institutions also offer graduate courses in military science

7. “军队院校学历教育” [Academic credential education], 军事训练 [Military training] (Beijing: Encyclopedia of China Publishing House, 2008), 539–540; Higher Education Law of the People’s Republic of China, August 29, 1998; “学历教育” [Academic education], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 111; and Information Office of the State Council, “2006年中国的国防” [China’s national defense in 2006] (white paper, Information Office of the State Council of the People’s Republic of China, December 2006).

8. “军队院校任职教育” [Military vocational education], 军事训练 [Military training] (Beijing: Encyclopedia of China Publishing House, 2008), 322.

as officers move up their career ladders.⁹ In other words, this component provides the technical and command component of officers' preassignment education and training.

Furthermore, the PLA has three terms for different types of academic institutions: *daxue* (大学), *xueyuan* (学院), and *xuexiao* (学校). Whereas *daxue* is always translated as "university" and *xuexiao* as "school," *xueyuan* can be translated as "college" or "academy." This may result in differing opinions as to the nature or importance of an institution. PLA academic institutions are organized into officer universities and *xueyuan* and NCO schools. Unfortunately, the PLA is not consistent when it uses an official English translation; for example, different official PLA publications translate the three Air Force Flight *Xueyuan* as "Flight Colleges" or "Flight Academies."¹⁰ Complicating matters, very few academic institutions have a website, and even those that do are not consistent with the English translation for their names.

9. "军队院校任职教育" [Professional education in military colleges and schools], 军事训练 [Military training] (Beijing: Encyclopedia of China Publishing House, 2008), 538–39; "人制教育院校" [Professional education college], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 144–5; and Information Office of the State Council, "China's national defense in 2006."

10. "哈尔滨飞行学院" [Harbin Flight College], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 481; and "Free Air Combat Training Course Included in Air Force Flight Academy Syllabus," China Military Online, February 6, 2018, http://english.chinamil.com.cn/view/2018-02/06/content_7934591.htm.

Each academic institution generally focuses on a particular range of specialties, such as engineering; aviator education and training; infantry, medical, or logistics (i.e., services); and commanding officers. Of note, in Chinese terms, a commanding officer is any officer who holds a leadership billet, such as the commander or deputy commander, all the way down to a deputy director of a third-level office.¹¹

Although most universities, such as engineering universities, have multiple subordinate officer xueyuan as well as a subordinate NCO school, some universities, such as the Aviation University of the Air Force, do not have any subordinate xueyuan, and are very narrow in scope. For example, the PLAAF Engineering University (空军工程大学 / 空工大) has the following eight subordinate academic institutions: Air and Missile Defense College (防空反导学院), Air Traffic Control and Navigation College (空管领航学院), Aviation Engineering College (航空工程学院), Aviation Maintenance NCO School (航空机务士官学校), College of Science (理学院), Engineering College (工程学院), Graduate School (研究生院), and Information and Navigation College (信息与导航学院). Although xueyuan do not have any subordinate xueyuan, some of them do have a subordinate NCO school. All academic institutions have subordinate administrative organizations, academic departments, and research offices.

11. “指挥军官” [Commanding officer], 中国军事百科全书(第二版 [Volume 39, Military cadre work, of China military encyclopedia, 2nd edition] (Beijing: Encyclopedia of China Publishing House, December 2006), 85–86.

EDUCATION LEVELS

The PLA has three levels (等级) of education: basic (初级), intermediate (中级), and advanced (高级). Each level is based on the PLA's officer and NCO grade system. As of 1988, the PLA has had 15 grades and 10 ranks. In the PLA system, the grade is far more important than the rank. It is the grade that determines one's position and level of responsibility. Besides each person having a grade, every organization is assigned a grade.

In addition to dividing PLA academic institutions into academic and preassignment education institutions, historically, the PLA has divided officer cadet and post-cadet education into two basic categories: command academic institutions (指挥院校) and special technical academic institutions (专业技术院校).¹² Furthermore, the PLA divides its academic institutions into three types: command (指挥), special technical (专业技术), and NCO (士官). Although officer command and special technical academic institutions include graduate school programs, no NCO schools include bachelor's degree or graduate school programs as of 2018.¹³

Personnel can receive the following types of degrees, diplomas, and certificates through the military education system.

12. “军队院校培训体制” [Training system in military xueyuan and schools], 中国军事百科全书(第二版 [Volume 39, Military cadre work, of China military encyclopedia, 2nd edition] (Beijing: Encyclopedia of China Publishing House, December 2006), 562-63.

13. Yuan Wei and Zhang Zhuo, ed., 中国院校展史 [China academic institution development history] (Beijing: National Defense Press, August 2001), 915.

- Certificate (学历证书 / 学位证书): NCOs and officers who do not receive a degree, including for one-year programs such as the command xueyuan commanding officer programs, receive a certificate.
- Special (technical) secondary diploma (中专): A one-year online program equivalent to a general equivalency diploma or high school diploma for two-year enlisted personnel, this diploma is required for one to be selected as an NCO. Of note, until 1994, this program was available in PLA officer academic institutions for officers who joined the PLA as enlisted personnel during the Cultural Revolution and received a direct promotion as an officer around the age of 15 to 17.
- Senior technical (associate's) degree (大专): A two- to three-year program for NCOs and officers.
- Bachelor's degree (本科): A four-year degree for cadets.
- Master's degree (硕士).
- Doctoral degree (博士).

According to the *Dictionary of Modern Military Education*, officer academic education institutions are responsible for the provision of bachelor's degrees to pre-commissioned officers, as well as graduate education (研究生教育).¹⁴ Preassignment education institutions are responsible for providing cultivation

14. “学历教育院校” [Academic education college], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 144.

and training for all categories of officers and NCOs (各级各类军官和士官岗位任职培训).

INSTITUTIONS

From the early 1980s until 1999, the PLA (including the People's Armed Police, in this instance) had 117 officer and NCO academic institutions.¹⁵ Since 1950, the PLA has held 16 All-Army Academic Institution Conferences (全军院校会议), which implemented major reforms to the entire PLA academic structure. During the 14th All-Army Academic Institution Conference in June 1999, decisions were made to reduce the number of institutions to 67, create the National Defense Student (国防生) reserve officer program at 118 civilian engineering and science and technology universities, separate academic credential education (学历教育) and preassignment education (任职教育), switch from academic credential education to preassignment education as the primary educational method, and designate 5 PLA universities as comprehensive universities (综合大学).¹⁶

As such, the focus of education in PLA academic institutions shifted from engineering and technology to military theory education for command and staff

15. 中国军事百科全书 中国人民解放军军史 [Volume 3, PLA military history, of China military encyclopedia] (Beijing: Encyclopedia of China Publishing House, December 2007).

16. Supersic, “军之骄子！解放军全军五所综合大学” [The proud army: Five comprehensive universities of the PLA], September 8, 2010, <http://club.xilu.com/emas/msgview-821955-4656460.html>; “综合院校” [University], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 143; and “中国人民解放军信息工程大学” [Information Engineering University], Baidu Baike, n.d., <https://baike.baidu.com/item/中国人民解放军战略支援部队信息工程大学/21507141?fromtitle=解放军信息工程大学&fromid=682913>.

officers. The five comprehensive universities, each of which has several subordinate officer xueyuan and, in some cases, an NCO school, are shown below. Only the first three of the universities remain after the 2017 reorganization; the other two were merged with other institutions.

- National University of Defense Technology (NUDT) (国防科学技术大学)
- Naval Engineering University (NAE) (海军工程大学)
- Air Force Engineering University (AFEU) (空军工程大学)
- PLA Information Engineering University (PLAIEU) (解放军信息工程大学)
- PLA Science and Engineering University (PLAUST) (解放军理工学院)

As of 2006, the PLA had 41 educational institutions authorized to award doctoral degrees and 60 authorized to award master's degrees.¹⁷ According to the 2006 defense white paper:

Under the unified leadership of the CMC, the PLA's academic institutions are managed at two levels: 1) by the Four General Departments and 2) by the military regions, PLAN, PLAAF, and PLASAF. The Four General Departments provide overall guidance for all PLA educational institutions, and the General Staff Department administers military education. The development goal of military educational institutions is to establish and improve a new school system with distinct military features to shift priority from education of officer candidates for academic credentials to preassignment education. The new system takes preassignment educational institutions as the main form, and makes a

17. Information Office of the State Council, "China's national defense in 2006."

distinction between these two types of education. The PLA has 67 military educational institutions, which are divided into two types: those for academic credentials and those for preassignment education. The former offers undergraduate education for pre-commissioned officers and graduate education for officers. The latter consists of basic-, intermediate-, and senior- level institutions and NCO schools, and offers preassignment training and rotational training for active-duty officers and NCOs. Some preassignment educational institutions also offer graduate courses in military science.¹⁸

During the 16th All-Army Academic Institution Conference in July 2011, the decision was made to change from identifying the institutions as academic institutions and preassignment education institutions to dividing them into the following eight categories: joint command (联合指挥), comprehensive (综合), service command (军种指挥), branch (兵种), academic (学历教育), specialty (专业), NCO (士官), and basic professional (初级任职教育) (see table 5-1).¹⁹ Also, the number of institutions was reduced to 64. Of note, the academic institutions category is still broken down into the academic and professional institutions, but only consists of 12 out of the 64 institutions. In addition, there were four People's Armed Police institutions.

In continuing to reform its academic structure, the PLA has focused on two areas: unit personnel requirements and academic institution structure. In November 2013, the Third

18. Information Office of the State Council, "China's national defense in 2006."

19. "全军院校会议" [All-Army Academic Institution Conference]; and "中国人民解放军院校" [Military academic institutions] in Dictionary of Modern Military Education [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 445-59, 460-85.

Plenary Session of the 18th Central Committee of the Communist Party of China adopted 中共中央关于全面深化改革若干重大问题的决定 (The decision on several major issues concerning comprehensively deepening reform), which stated, “We must deepen the reform of military academic institutions and improve the triad of military education, military training, and military professional education.”²⁰ According to a General Political Department (GPD) report in June 2014 concerning the military professional education component, officers at all levels should generally accumulate no less than 240 study hours per year, and enlisted personnel should have no less than 180 study hours.²¹

Building on reforms that began in late 2016, in June 2017 the PLA further reduced the total number of PLA officer and NCO academic institutions from 64 to 37; this included the abolishment of several institutions, the creation of new ones, and the merging of others (see table 5-2 for a full list). For example, the PLA AF went from a total of 15 academic institutions in 2006 to a total of 10 in 2017. The 43 institutions include 37 PLA and six People’s Armed Police institutions, the latter of

20. Liu Longlong, “军队院校调整改革：师职以上领导岗位大幅压减” [Military academic institutions adjustment and reform: The leadership positions above the division are greatly reduced], Sina, August 7, 2017, <http://news.sina.com.cn/c/nd/2017-08-07/doc-ifyitayr9652243.shtml>.

21. Pang Kun and Lu Rongjun, “发展军事职业教育是实现强军目标的战略路径” [Developing military professional education is strategic path for achieving strong military objective], Jiefangjun Bao, June 4, 2014, 3.

which are not discussed in this chapter.²² In addition, “several of their grades were reduced, the number of service support personnel was reduced, and the proportion of civilian staff to make the frontline teaching and research forces was increased.”²³

Within the PLA, each organization is assigned a bureaucratic grade commensurate with the grade of the commander and the political commissar. The grade determines the organization’s level of relative importance. A reduction in grade results in a loss of bureaucratic importance for the organization, as well as all of its leaders, and all subordinate organizations and personnel. Also of note, the former Naval Marine Academy and Air Force Airborne Troop College were converted into training bases, which means that the students apparently no longer receive four years of academic and technical training before they begin their specialty training. It is not clear why these schools were downgraded to bases.

22. “共43所！国防部公布调整改革后军队院校名称” [A total of 43! MND announces the name of military colleges after adjustment and reform], 81.cn, June 29, 2017, http://www.81.cn/jmywyl/2017-06/29/content_7657370.htm; “军改后43所军队院校名单及分布区公布” [List of 43 military academies and distribution areas announced after the military reform], Sohu, January 5, 2018, http://www.sohu.com/a/214861084_184797 (site discontinued); and PLA Air Force, 中国人民解放军空军军官手册 [PLA Air Force officer handbook] (Beijing: Lantian Press, November 2006), 38–39.

23. Liu, “Military academic institutions adjustment and reform.”

Table 5-1. The PLA's 64 academic institutions in 2011

	Joint Cmd	Comp	Service Cmd	Branch	Academic	Speciality	NCO	Basic Professional
CMC (2)	1	1						
GSD (19)		2	2	11	2	2		
GPD (3)						3		
GLD (10)					4	4	2	
GAD (5)					2	2	1	
PLAN (8)		1	1	3	2		1	
PLAAF (11)		1	1	5	1	2	1	
PLASAF (2)			1		1			
MR (4)				3				1
TOTAL	1	5	5	22	12	13	5	1

Table 5-2 below lists the current 37 PLA officer and NCO academic institutions that were reorganized in June 2017; they are listed in protocol order.²⁴ As of 2017, the PLA subordinated its academic institutions to the following organizations: the Central Military Commission, Army (PLAA), Navy (PLAN), PLAAF, Rocket Force (PLARF), and PLASSF. The table includes the Headquarters (HQ) the institution is subordinate to, the English and Chinese name, and the locations of the main campuses (校本部) and branch campuses (分校区). Overall, the institutions are organized into two categories: 1) directly subordinate to the Central Military Commission (军委直属院校) and 2) service and branch academic institutions (军兵种院校). Note: Each officer university and xueyuan has several subordinate xueyuan, and some have an NCO school.

24. Defense Intelligence Agency, *Directory of PRC Military Personalities 2018* (Washington, DC: Defense Intelligence Agency, March 2018); and "List of 43 military academies."

Table 5-2. The PLA's 37 academic institutions in 2018

#	CMC	Institution	Main Campus	Branch Campuses
1		National Defense University (国防大学)	Beijing	Xi'an, Shanghai, Shijiazhuang
2	PLA	National University of Defense Technology (国防科技大学)	Changsha	Nanjing, Wuhan, Hefei
3		Army Command Academy (陆军指挥学院)	Nanjing	
4		Army Engineering University (陆军工程大学)	Nanjing	Shijiazhuang, Chongqing, Wuhan, Xuzhou
5		Army Infantry Academy (陆军步兵学院)	Nanchang	Shijiazhuang
6		Army Armored Force Academy (陆军装甲兵学院)	Beijing	Bengbu, Changchun
7		Army Artillery and Air Defense Academy (陆军炮兵防空兵学院)	Hefei	Nanjing, Zhengzhou, Shenyang
8		Army Aviation College (陆军航空兵学院)	Beijing	
9		Army Special Operations Academy (陆军特种作战学院)	Guilin	Guangzhou
10		Army Border and Coastal Defense Academy (陆军边海防学院)	Xi'an	Urumqi, Kunming
11		Army Chemical Defense Academy (陆军防化学院)	Beijing	
12		Army (Third) Medical University (陆军军医大学 (第三军医大学))	Chongqing	
13		Army Service Academy (陆军勤务学院)	Chongqing	Wuhan
14		Army Military Transportation Academy (陆军军事交通学院)	Tianjin	Zhenjiang, Bengbu
15		PLAN	Naval Command College (海军指挥学院)	Nanjing
16	Naval Engineering University (海军工程大学)		Wuhan	Tianjin
17	Naval Dalian Ship Academy (海军大连舰艇学院)		Dalian	
18	Naval Submarine Academy (海军潜艇学院)		Qingdao	
19	Naval Aviation University (海军航空大学)		Yantai	Qingdao
20	Naval (Second) Medical University (海军军医大学 (第二军医大学))		Shanghai	
21	Naval Service Academy (海军勤务学院)		Tianjin	
22	Naval NCO School (海军士官学校)		Bengbu	

Table 5-2. The PLA's 37 academic institutions in 2018 (continued)

#	CMC	Institution	Main Campus	Branch Campuses
23	PLAAF	Air Force Command College (空军指挥学院)	Beijing	
24		Air Force Engineering University (空军工程大学)	Xi'an	
25		Aviation University of the Air Force (空军航空大学)	Changchun	Qingdao
26		Air Force Early Warning College (空军预警学院)	Wuhan	
27		Air Force Harbin Flight Academy (空军哈尔滨飞行学院)	Harbin	
28		Air Force Shijiazhuang Flight Academy (空军石家庄飞行学院)	Shijiazhuang	
29		Air Force Xi'an Flight Academy (空军西安飞行学院)	Xi'an	
30		Air Force (Fourth) Medical University (空军军医大学(第四军医大学))	Xi'an	
31		Air Force Service College (空军勤务学院)	Xuzhou	
32		Air Force Communications NCO School (空军通信士官学校)	Dalian	
33	PLARF	Rocket Force Command College (火箭军指挥学院)	Wuhan	
34		Rocket Force Engineering University (火箭军工程大学)	Xi'an	
35		Rocket Force NCO School (火箭军士官学校)	Qingzhou	
36	PLASSF	Strategic Support Force Aerospace Engineering University (战略支援部队航天工程大学)	Beijing	
37		Strategic Support Force Information Engineering University (战略支援部队信息工程大学)	Zhengzhou	Luoyang

In June 2017, Xi implemented major changes to the PLA National Defense University (NDU) and the NUDT. According to a deputy director of the Ministry of National Defense Information Bureau and the Ministry of National Defense spokesperson, Senior Colonel Wu Qian, "This adjustment and reform of the military academic institutions basically formed a layout with the joint operations academic institutions as the core (基本形成以联合作战院校为核心), the branches/arms specialized academic institutions as the foundation (以兵种专业院校为基础), and the

military-civil fusion cultivation as the supplement (以军民融合培养为补充的院校布局).”²⁵

At the ceremony in June 2017, Xi emphasized that the “NDU is an important base for cultivating joint operations personnel and senior- and intermediate-level leading officers. It is necessary to grasp the characteristics and laws of the construction of high-level professional education institutions, promote the innovation of teaching and scientific research management, highlight high-quality joint operations command and staff training, strengthen military theoretical research, and strive to build a world-class comprehensive joint command university.”²⁶ Furthermore, he emphasized that:

NUDT is a high-quality, new-type, military personnel training and national defense technology independent innovation institution. It is necessary to keep up with the development trend of the world’s military science and technology, adapt to the requirements of winning localized wars of informationization, do a good job in cultivating general professional talents and joint operations to ensure talents, strengthen key core technology research, and strive to build world-class higher education institutions.²⁷

25. “国防部公布调整改革后43所军队院校名单” [The MND announced the list of 43 military academies after adjustment and reform], China (website), June 29, 2017, <https://news.china.com/domestic/945/20170629/30866113.html>.

26. “新调整组建的军事科学院国防大学国防科技大学成立大会暨军队院校科研机构训练机构主要领导座谈会在京举行” [Leaders from the PLA’s academic and research institutions and training organizations hold meeting in Beijing to implement reforms for the Academy of Military Science, NDU, and NUDT], *Xinhua*, July 20, 2017, http://www.xinhuanet.com/mrdx/2017-07/20/c_136457579.htm.

27. “Leaders from the PLA’s academic and research institutions.”

In February 2018, Xi recommended improving the Triad New-Type Military Personnel Cultivation System, which resulted in the PLA's academic institutions reorganizing their administrative and functional staff departments.²⁸ Yet another change occurred in March 2018, when the PLA downgraded the NDU from a Theater Command (TC) leader-grade organization to a TC deputy leader-grade organization, which is the same grade as the NUDT. The Academy of Military Science, which is not a PLA academic institution, was also downgraded to TC deputy leader.²⁹

Of note, despite the fact that major changes have continued apace during the Xi Jinping era, the PLA has not held an All-Army Academic Institution Conference since Xi took office. Although no information has yet to be announced about the 17th conference, it will most likely be held in mid-to-late 2020 and will likely focus on reforms under Xi. The key themes will include the reduction of PLA academic institutions to 37 that occurred in June 2017 and the abolition of the National Defense Student Program.

OFFICER EDUCATION

The PLA officer corps has five career tracks: military, political, logistics, equipment, and special technical officers. The PLA also makes a distinction

28. “着力健全三位一体新型军事人才培养体系” [Focus on improving the triad new military personnel training system], February 28, 2018, http://www.81.cn/jfjbmap/content/2018-02/28/content_200544.htm.

29. Cui Shifang, “PLA NDU is Downgraded,” *Epoch Times*, March 12, 2018, <https://www.epochtimes.com/gb/18/3/12/n10211708.htm>.

between what it calls “commanding officers” (指挥军官) and staff officers, who are also identified as “noncommanding officers” (非指挥军官). As previously discussed, by definition, a commanding officer is an officer who holds any type of leadership billet. The PLA combines the first four career tracks together and identifies them as nonspecial technical officers (非专业技术军官).

For simplicity purposes and to make the distinction between the first four tracks as a group and the special technical officer track, this chapter identifies the first four tracks as “regular officers,” even though the PLA does not use this term.³⁰ It is not clear exactly when it is determined whether a cadet will become a commanding officer, but it is most likely within the first two years of cadet training (i.e., during the academic education phase). Once officers complete their cadet education, their future education is based on whether they are a commanding officer or a noncommanding officer. Specifically, commanding officers, regardless of their career track, return to the command xueyuan for their military education and to receive a certificate, while noncommanding officers can return to their original cadet academic institution, where they may receive a graduate degree.

New officer cadets attend one of the PLA’s academic institutions to receive their pre-commissioning academic credential education (生长军官学历教育) and preassignment education (生长军官任职教育). In some cases, the two types of education are divided between different institutions. For example, PLAAF

30. “指挥军官” [Commanding officer], 中国军事百科全书(第二版 [Volume 39, Military cadre work, of China military encyclopedia, 2nd edition] (Beijing: Encyclopedia of China Publishing House, December 2006), 85–86.

aviators receive their academic credential education as a cadet at the Aviation University of the Air Force for four years, for which they earn a bachelor's degree. Next, they receive their preassignment education as a student at a flight academy for two years, for which they earn a second bachelor's degree. For the academic credentials, the length of training can vary.

A command xueyuan is an educational organization that provides basic training and education for cadets (生长军官) who will serve in commanding officer billets in the military, political, logistics, and equipment specialties and staff officer billets in the HQ/Staff Department. In addition, a command xueyuan provides military education to post-cadet commanding officers and staff officers in all four specialties.³¹

Command xueyuan do not necessarily have to have the word "command" in their name, but do have to provide cadet-level education for commanding officers and staff officers. Command institutions are organized into three levels: basic, intermediate, and advanced.³² Although commanding officers in the logistics and equipment tracks receive their undergraduate education at a logistics or equipment-related academic institution, they receive their intermediate education at their service's command academic institution.

Basic-level academic education includes a bachelor's degree. The focus is on military and political foundation education for pre-commissioned officers (生长军官) in officer cadet academic institutions who

31. "指挥学院" [Commanding college], in *Dictionary of Modern Military Education* [in Chinese], ed. Dong Huiyu and Mou Xianming (Beijing: NDU Press, August 2011), 140–41.

32. Yuan and Zhang, *China academic institution development history*, 914.

are preparing to become platoon-level commanding officers, as well as for staff officers in the military track.³³ The cadets include high school graduates and outstanding enlisted personnel. Some of these institutions also include a two- or three-year senior technical degree for NCOs who will assume squad deputy leader or leader billets. Upon graduation, new officers serve as platoon and company commanders, vessel branch chiefs (部门长), and aviation pilots and navigators. All commanding officers who serve in billets at the battalion level and below must complete their basic-level education.³⁴

Intermediate-level education includes both commanding officers and staff officers, as well as special technical officers, at the battalion level who are preparing to assume regiment-level commanding officer or staff officer billets.³⁵ Most, but not all, of these *xueyuan* have the word *zhihui* (command) in their name, such as the PLA Air Force Command College. “Air Force Command College” and “AFCC” are the official English name and acronym. The lead author of this chapter has escorted student delegations from the AFCC within the United States each year since 2014.

Although various logistics *xueyuan* provide this level of command military education, they do not have

33. Yuan and Zhang, China academic institution development history, 914; and “干部逐级培训制度” [System of cadre training at different levels], 军队干部工作 中国军事百科全书(第二版 [Volume 39, Military cadre work, of China military encyclopedia, 2nd edition] (Beijing: Encyclopedia of China Publishing House, December 2006), 119; “Commanding college,” 140–41.

34. “System of cadre training,” 119.

35. Yuan and Zhang, China academic institution development history, 914; and “Commanding college,” 140–41.

“zhihui” in their names. These xueyuan are responsible for providing combined-arms education as well as individual service and branch education for regiment-level military, political, logistics, and equipment track officers so they can become advanced-level officers. They also provide education for staff officers serving in the four specialties at the group army, division, brigade, and regiment levels. Finally, they provide education for combined-arms combat, political, and logistics instructors.

Most commanding xueyuan also have a four-year program for cadets who are going to progress as staff officers. All commanding officers who serve in regiment-, brigade-, and division-level billets must complete their intermediate-level education.³⁶

Advanced-level education includes officers who are preparing to assume commanding billets at the corps level and who have completed intermediate-level education and already have a bachelor’s degree.³⁷ This is a one-year program that results in a certificate. The NDU (国防大学), which is the only institution responsible for joint education, is the only institution that fits in this level. Whereas most commanding officers attend the NDU for one year and receive a certificate, other noncommanding officers can attend the NDU’s graduate school and receive a master’s or doctoral degree. Students who attend the NDU are selected from officers holding corps leader-grade and deputy-leader-grade billets. All commanding officers who serve in corps-level billets and above

36. “System of cadre training,” 119.

37. Yuan and Zhang, *China academic institution development history*, 914; and “Commanding college,” 140–41.

must complete their advanced-level education to be promoted in grade.³⁸

Historically, no formal joint training occurred until officers reached the corps level and attended the NDU; however, this is beginning to change. In 2017, the NDU initiated a 10-month course, running from October to July, for 200 commanding and staff officers.³⁹ The commanding officers were selected from officers at battalion or deputy regiment level, and all of the staff officers had working experience in departments in the five TC HQs, including the Joint Operations Command Centers, as well as the different service HQs. The staff officers also came from HQ departments in various service and branch HQs at the division, corps, and above levels. Each student receives a certificate. The NDU plans to hold two of these courses per year.

With the increased emphasis on joint training, in early 2017, the Eastern TC Joint Operations Command Center began requiring all personnel to attain a duty qualification certificate (值班资格证书) for joint command training (联合指挥训练) whereby each person must pass over a dozen tests in four categories, including basic skills, professional skills,

38. "System of cadre training," 119.

39. Huang Panyue, ed., "PLA aims to cultivate commanding talents for joint operations," China Military Online, September 7, 2017, http://english.chinamil.com.cn/view/2017-09/07/content_7747234.htm; and Chen Yanwei and Cai Pengcheng, "Our military joint operations command talent selection and training has taken a new step; This year, we will start a joint job qualification training course," 81.cn, September 6, 2017, http://www.81.cn/jfjbmap/content/2017-09/07/content_187441.htm.

skill applications, and physical fitness.⁴⁰ It is not clear how the program is implemented, the length of time it is implemented, or where it is implemented. Although the article is about the Eastern TC, each TC has most likely implemented the same program.

Although PLAAF officers now participate in joint exercises throughout their careers, as a general rule, they do not participate in any joint education until they are deputy corps-level flag officers. By that time, however, they have typically reached their mandatory grounding (停飞) age and can no longer fly aircraft; the mandatory grounding ages are 45 for fighter and ground attack aircraft, 50 for bombers and helicopters, 55 for male transport pilots, and 48 for female transport pilots.⁴¹

As for graduate degrees, whereas the command academic institutions primarily provide a one-year program that results in a certificate, intermediate and advanced institutions also provide master's and doctoral degrees that focus on command issues.⁴² For example, in 2016, the AFCC recruited 60 officers

40. Cheng Yongliang, “东部战区组织联指中心人员值班资格首批认证” [Eastern theater command organizes the first certification for Joint Operations Command Center personnel duty qualification], Chinanews, February 14, 2017, <http://www.chinanews.com/mil/2017/02-14/8149557.shtml>.

41. Zhu Rongchang, 空军大辞典 [Air Force dictionary] (Shanghai: Shanghai Dictionary Press, September 1996), 175; 当代中国空军 [China today: Air Force] (Beijing: China Social Sciences Press, 1989), 507; and PLA Air Force, PLA Air Force officer handbook, 230.

42. Yuan and Zhang, China academic institution development history, 914.

to receive a master's degree in a two-and-a-half-year program.⁴³

Graduates from special technical academic institutions, most of whom serve as special technical officers and are not commanding officers, can return to their original basic academic institutions (i.e., where they received their bachelor's degrees) to receive a master's or doctoral degree that focuses on their technical specialties. For example, in 2017, the Air Force Engineering University had 1,600 students in master's and doctoral programs, including 38 master's specialties and 25 doctoral specialties.⁴⁴

According to China's 2015 white paper, 中国的军事战略 (China's military strategy) (see figure 5-1):

Concerning cultivating (培养) new-type military personnel, China's armed forces will continue with the strategic project for personnel training and perfect the system for military human resources. They will deepen the reform of military educational institutions and improve the triad training system for new-type military personnel (军事职业教育三位一体的新型军事人才培养体系), which consists of the three components of institutional education (军队院校教育); unit training (部队训练); and military professional education (军事职业教育), in order to provide more opportunities to cultivate more personnel who can meet the demands of informationized warfare.⁴⁵

43. "PLA Air Force Command College," China Education Online, n.d., <http://souky.eol.cn/HomePage/takeinfo/880/13689.html>.

44. "About University," [Chinese] Air Force Engineering University (website), n.d., <http://www.afeu.cn/web/afeu/dxgk/gk/>.

45. Chinese Ministry of National Defense, China's military strategy.

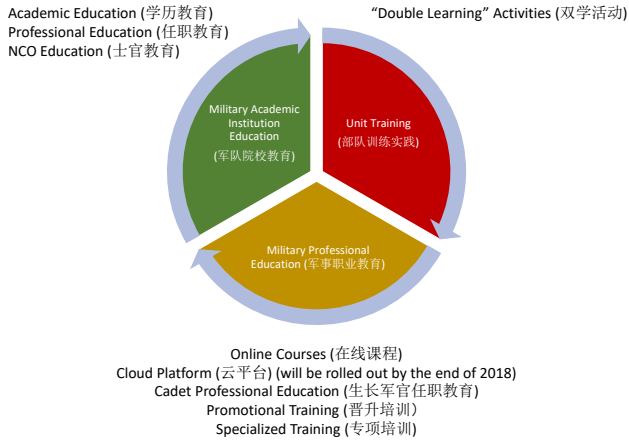


Figure 5-1. “Triad” new-type military talent cultivation

Unlike command education institutions, special technical institutions are organized into the following three categories, vice levels.⁴⁶

- The first category includes outstanding enlisted personnel and civilians who have received a ninth-grade education, and who then receive two or three years of education and a general equivalency diploma.
- The second category includes outstanding enlisted personnel and civilians who have earned a high school degree, and then receive a three-year senior technical degree.
- The third category includes outstanding enlisted personnel and civilians who have earned a high school degree, and then receive a four-year bachelor’s degree.

46. Yuan and Zhang, China academic institution development history, 914–15.

NONCOMMISSIONED OFFICERS (NCOS)

Based on regulations implemented in the early 2000s, NCOs must now have a general equivalency diploma to become a junior-grade NCO, a senior technical degree to become an intermediate-grade NCO, and a bachelor's degree to become a senior-grade NCO.⁴⁷ But most NCO schools currently only provide two-year secondary technical or two- or three-year senior technical degree education for NCOs, making them inadequate as institutions to educate enlisted personnel who already have an associate's or bachelor's degree.

Noncommissioned officer (NCO) schools, which are division leader-grade organizations, also provide three-month preassignment programs for personnel to become nontechnical specialty junior-grade NCOs and a three- to six-month preassignment program for personnel to become special technical junior-grade NCOs.⁴⁸ Depending on the NCO's specialty, NCO schools also offer a two- to three-year preassignment senior technical degree program for intermediate- and senior-grade NCOs. It is not clear where an NCO can receive a bachelor's degree; however, the PLA has increased the number of online correspondence courses it offers.

One of the key issues today is that, each year, the PLA averages about 150,000 new enlisted recruits – roughly 35 percent of the total number of new enlisted members – who already have some college education.

47. Kenneth Allen and Morgan Clemens, *The Recruitment, Education, and Training for PLA Navy Personnel* (Newport, RI: China Maritime Studies Institute, 2014).

48. PLA Air Force, 中国人民解放军空军士兵手册 [PLA Air Force enlisted force handbook] (Beijing: Lantian Press, 2006), 259.

But the PLA NCO schools are not geared toward providing education for them; therefore, it is not clear whether they receive any type of education at an NCO school after they become an NCO.

Although the PLA previously had five stand-alone NCO schools (Army vehicle, Army medical, Army ordnance, Navy surface vessel support, and Air Force communications), as of 2018, there are only three: Navy vessel, Air Force communications, and PLARF. Besides stand-alone NCO schools, each service also has NCO schools that are subordinate to officer universities and xueyuan. Each school focuses on one specialty. For example, the PLAAF has one stand-alone school and at least two subordinate schools, which are listed below:

- Air Force Communications NCO School (空军通信士官学校), which has about 1,500 students⁴⁹
- Air Force Engineering University's Aviation Maintenance NCO School (空军工程大学航空机务士官学校)⁵⁰

49. "PLA Air Force NCO Communications School," *Air Force News*, n.d., <http://www.baike.com/wiki/中国人民解放军空军通信士官学校> (site discontinued).

50. Zhou Honghui, "空军工程大学航空机务士官学校加强党组织建设实际" [Air Force Engineering University Aviation Maintenance NCO School strengthens party organization development documentary], *Air Force News*, December 12, 2017, 3; and "空军工程大学航空机务士官学校简介" [Air Force Engineering University Aviation Maintenance NCO School introduction], 360doc.cn, November 8, 2017, http://www.360doc.com/content/17/f1108/09/7872436_701875130.shtml (page deleted from site).

- Air Force Early Warning College's Radar NCO School (空军预警学院雷达士官学校)⁵¹

EXAMPLE CASE: PLAAF COMMANDING OFFICER TRAINING

From 1949 to 2011, China's cultivation and training system for commanding officers (指挥军官培养模式) went through five major stages.⁵² These changes led to widespread confusion about how careers are supposed to progress, and have led to many commanding officers holding positions without the required education credentials. For example, a survey of over 2,100 Air Force personnel who became commanding officers in 2012 or afterward revealed that 63.7 percent were unclear about how their careers were supposed to proceed, and 64.2 percent reported that they had not received the required cultivation and training for their positions.

Most discussions divide the training model for Air Force commanding officers into either Air Force ground command officers and flight command officers or officers serving in commanding billets or staff officer billets, and the programs are designed correspondingly. Figure 5-2 below provides an overview of the five stages, which were

51. Wang Xiaonan, "预警学院雷达士官学校教学科研以十九大精神提升办学理念" [Early Warning College Radar NCO School Teaching and Research Division uses the 19th Party Congress spirit to promote the concept of running a school], *Air Force News*, December 25, 2017, 2.

52. Liu Baoying and Cheng Ling, 中外空军指挥军官培养模式比较研究 [A comparative study on the training models of commanding officers in China and foreign countries] (Beijing: Lantian Press, 2016).

adopted during the All-Army Academic Institution Conferences (全军院校会议).

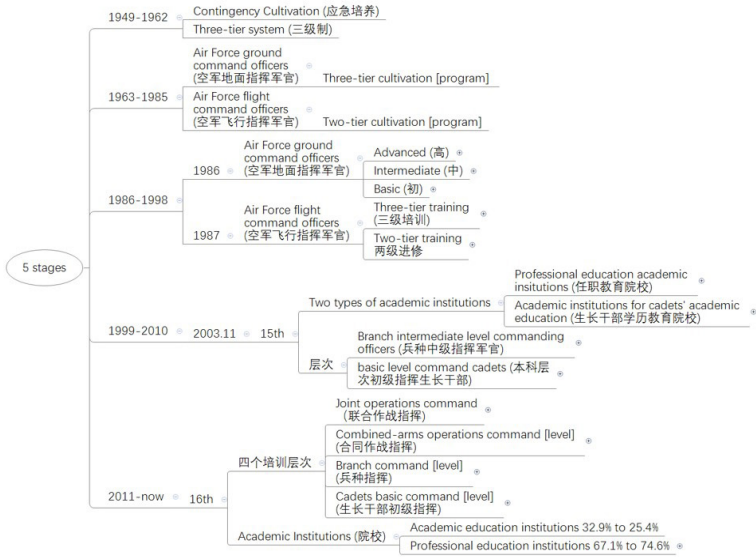


Figure 5-2. Five stages of PLAAF command education and training

Pilots are the main component of PLAAF combat strength and the main source of command officers at all levels in the PLAAF.⁵³ The quality and speed of pilot training directly determines the quality of the PLAAF officer corps, unit combat strength, and emergency operations capabilities. The PLAAF, therefore, emphasizes the role of pilot cultivation and training (飞行员培训) and regards it as the key link in officers’

53. He Weirong, ed., *Science of Air Force Training* (Beijing: Academy of Military Science Press, 2006), 257; and Kenneth W. Allen, *PLA Air Force, Naval Aviation, and Army Aviation Aviator Recruitment, Education, and Training* (Washington, DC: Jamestown Foundation, February 2016).

military training. Pilot education progresses from rudimentary to advanced in the following four phases.

- Basic-level education and training at the Aviation University of the Air Force (基础教育)
- Basic flight training at one of the three flight academies (中级和高级教练机训练)
- Transition training at the pilot's operational unit (改装训练)
- Training in the pilot's operational aircraft at the pilot's operational unit (作战部队)

All pilots are considered military-track officers and move up their promotion ladders in this career field, but only PLAAF pilots who become commanding officers in their units have the opportunity to attend academic courses at the AFCC. As such, most pilots do not receive any military education once they are assigned to their operational unit, or cease becoming a commanding officer. For example, a pilot can become one of the deputy commanders at the flight squadron (company level), flight group (battalion level), or air regiment/brigade level, but not the commander. As such, he becomes a regular aviator (普通飞行员) and continues to move up his career path only as a pilot or is grounded (停飞) and assigned to a staff position at an HQ.

Therefore, it appears only a few pilots who continue to move up their career paths as commanding officers receive any military education at the AFCC. The PLAAF has apparently created three successive courses for flight squadron and flight group commanding officers.⁵⁴ These include a flight

54. Fu Guoqiang, *Comparison of Chinese and Foreign Military Flight Education* (Beijing: Military Science Press, January 2013), 64.

squadron course (飞行中队长班), a mid-level course (中培班), and a small campaign course (小战役班). The duration of these courses is unknown, but they most likely last only a few weeks at the most. According to one source, the primary reason the PLAAF does not have longer courses or courses that all pilots attend is the concern that a lengthy absence from a pilot's unit would adversely impact the pilot's flying capabilities.⁵⁵

It appears the next time pilots who serve as commanding officers in a regiment, brigade, or division HQ receive any military education is when they attend their intermediate (battalion/major and regiment/colonel) and advanced (division/senior colonel) education at the AFCC in Beijing.⁵⁶ Although all commanding officers return to the AFCC for their intermediate education, they only receive a certificate for that training.⁵⁷

As a result, very few commanding officers in any field, including aviators, receive a graduate degree. As of June 2016, the AFCC had 21 specialties for commanding officers. These include military thought (军事思想), military history (军事历史), strategy (战略), campaigns (战役), tactics (战术), operations/combat command (作战指挥), logistics (后勤), military operations (军事运筹), military management/

55. Fu, *Chinese and Foreign Military Flight Education*, 61.

56. PLA Air Force, PLA Air Force officer handbook, 331–32; and Fu, *Chinese and Foreign Military Flight Education*; Bai Chongming and Ji Changguo, ed., *Air Force Strategy Transformation and Flight Personnel Education Innovation* (Beijing: Lantian Press, May 2010).

57. “中国人民解放军空军指挥学院” [China PLA Air Force Command College], Baidu Baike, n.d., <https://baike.baidu.com/item/中国人民解放军空军指挥学院>.

administration (军事管理), and military political work (军队整治工作).

The AFCC also has six-month and one-year specialty programs for staff officers, who receive a secondary or special technical degree. Special technical officers and some staff officers (参谋军官) do receive graduate degrees during their intermediate education. The PLA has three terms for staff officers: *canmou* (参谋) for the military track, *ganshi* (干事) for the political track, and *zhuli* (助理) for the logistics and equipment tracks. *Canmou junguan* (参谋军官) is the generic term for all of them.⁵⁸ The AFCC, as of 2016, had 14 graduate programs, including 3 doctoral programs and 2 postdoctoral programs. The number of students ranges from about 30 to 60, some of whom get to travel abroad toward the end of the course. For example, the lead author of this chapter escorted the annual AFCC delegations to Washington, DC, or Maxwell Air Force Base from 2014 to 2018. The number of students averaged 15, of whom 10 to 12 were senior colonels with the grade of division deputy leader or division leader.

As with everything in the PLA, however, there are always exceptions to the rule. Although most aviators do not receive a graduate degree, some aviators have been involved in special programs. Specifically, during the early 1990s, the PLAAF began providing the opportunity for certain pilots to receive a master's degree. For example, in 1994, Northwestern Polytechnical University (西北工业大学) in Xi'an began providing master's degree programs in engineering for PLAAF test pilots assigned to the

58. “参谋军官” [Staff officers contingent], in 军队干部工作 [Military cadre work], ed. Xu Yaoyuan (Beijing: Encyclopedia of China Publishing House, November 2006), 72-73.

Ministry of Aviation Industry's China Flight Test Establishment at Xi'an Yanliang.⁵⁹ In addition, in January 2003, Le Wenya (勒文雅), who was a member of the sixth female aviator class (1989–93), became the first female aviator in the PLAAF to receive a master's degree, which she began at the AFCC in 2000.⁶⁰

SUMMARY

The entire training system for PLA personnel, both officer and enlisted, has, for a long time, focused on just that—training. The only education that has happened has been very basic (i.e., officers' undergraduate education) or consisted of the communist political education that permeates all levels of the system. It was not until the dawn of the twenty-first century that the PLA even considered that officers, much less enlisted members or NCOs, might benefit from a more generalized education.

One thing that has been mentioned throughout, but needs to be explicitly emphasized, is throughout the system, almost all personnel training, both officer and enlisted, takes place solely within the confines of an individual's specialty. Pilots attend training with other pilots, submarine engineers with other submarine engineers, and truck mechanics with other truck mechanics. There is almost no interaction, even within a single service, with members of a different discipline, much less from another service. This has major implications for improving the force as a whole.

59. “首批硕士试飞员毕业20周年” [20th anniversary for first master's test pilot graduates], Snowflake News, June 21, 2018, <https://www.xuehua.us/a/5eb5c33c86ec4d2aadd665e3>.

60. *Air Force News*, January 28, 2003, 1.

Indeed, it is not until the very senior levels of training at the NDU that joint topics are even discussed. There are a handful of reports indicating that the PLA's latest round of reorganization, specifically focused on establishing and improving jointness, is leading to changes in the military education system, including joint training at lower levels. Although there have been no definitive public policies as of mid-2018, it is logical to conclude this would be one of the changes that Xi Jinping has ordered as he tries to remake the PLA for the twenty-first century.

A joint force is not one in which all of the services are “modernized” (现代化), “informatized” (信息化), and “intelligentized” (智能化); it is one in which they can operate together. This will not happen unless the PLA begins to break down the institutional barriers preventing specialties, career tracks, and services from interacting and learning together and from one another. A well-trained force is critical and necessary to a military, but it is ultimately insufficient to fight and win wars. A modern, high-tech military must be well-equipped, well-educated, and well-integrated if it wants to prevail. As described above, the current training and cultivation system does not lend itself to creating a joint force, but we are beginning to see some shifts which may slowly start to reform the system and better enable military education in the future.

6. LEARNING FROM RECENT PROTESTS AMONG PEOPLE'S LIBERATION ARMY VETERANS

Neil J. Diamant

Widespread and persistent veteran protests challenge the security forces but do not threaten the communist party in any significant way, primarily because the veterans who protest tend to be older and in ill health and do not articulate an alternative political vision. Instead, protests focus on improving material benefits, commemorating past wars, or fighting corruption. At the same time, the scale of veteran protests do threaten Communist Party of China (CPC) Secretary Xi Jinping's plans for rapid transformation of the People's Liberation Army (PLA) because large-scale reductions in the land forces would swell the ranks of protesters. To better manage veterans, in March 2018, the Xi Jinping administration established the Ministry of Veteran Affairs (MVA). This chapter argues that this ministry is unlikely to quell veteran protests. Veterans also are quite skeptical.

Policy implications of this chapter include:

- The establishment of the MVA presents a new opportunity for American engagement with China. The United States has accumulated significant policy expertise managing veteran benefits which could prove helpful to China as it navigates the challenging logistics running a separate ministry for veterans.
- The Chinese government has an interest in portraying its public as standing unified beyond state policy objectives and ambitions. But, looking at how China treats its veterans

suggests that its population is not as nationalistic or militaristic as media reports often suggest.

Amid so much bellicose rhetoric about looming wars with China—over trade and unpopulated islands—why should anyone care about actual wars of the distant past, the postwar activities of millions of their combatants, or the recent establishment of the MVA?¹ In particular, why should policy makers, scholars, and analysts who are well-versed in the harder currency of evaluating the PLA in terms of its armament, organization, command structure, and doctrine, devote that scarce resource—time—toward understanding this softer side of civil-military relations?

I would like to make the case for the payoff of this investment on several grounds. First, veterans are long-time “disaffected insiders” who are well-organized, trained in weaponry, and thus potentially a source of danger for Communist rule.² Second, Xi Jinping’s plans to transform the PLA into a more technologically advanced force less beholden to large ground forces could be threatened by ongoing unrest among discharged soldiers. Third, veteran discontent can affect recruitment into the PLA as the public becomes increasingly aware of what awaits soldiers

1. “Zhongguo tuiyi junren yiyou 5700 duowan,” *Chinanews*, March 18, 2017, <http://www.chinanews.com/mil/2017/03-18/8177011.shtml>.

2. For a recent study of insider protests, see Kevin J. O’Brien, “China’s Disaffected Insiders,” *Journal of Democracy* 28, no. 3 (July 2017): 5–13.

upon their demobilization.³ Fourth, to counter veteran protests, China recently established a ministry to deal with veterans' problems, which is the most significant innovation in veteran management since 1949. What are the ministry's chances for success given China's history of dealing with veteran discontent?

This essay tackles these issues. I argue that the new ministry is unlikely to succeed in the absence of other reforms, and that veterans will continue to be a chronic thorn in the side of the regime. Veteran protests could delay the planned transformation of the PLA through large-scale land force reductions (which hits relatively unskilled soldiers the hardest) and increase the difficulty of recruiting high-quality people into the PLA. At the same time, veteran discontent does not constitute a danger to the CPC. The implication of this for the United States is policy makers should not deduce promilitary sentiment on the part of the Chinese public based on media reports of rising nationalism. Instead, this essay suggests that the treatment of veterans can be an alternative, and potentially more accurate, way of gauging contemporary Chinese feelings toward the PLA.⁴

In this chapter, I review the character and dynamics of recent veteran protests and examine the

3. “关于漯河市涉军事事件的深思” [Thinking about the Luohe veteran incident], n.d., <http://sdds-gov-cn.sdds-gov-cn.bbs.mc81.net/thread-1764-1-1.html> (site discontinued).

4. For an example of widespread skepticism during the Korean War, see Neil J. Diamant, *Embattled Glory: Veteran, Military Families and the Politics of Patriotism in China, 1949–2007* (Lanham, MD: Rowman and Littlefield, 2009), 126–30.

government's response.⁵ I then look at the implications for understanding civil-military relations, military reform, Chinese nationalism, and opportunities for US-Chinese cooperation, given the establishment of the MVA.

VETERAN ACTIVISM 2010–18

Veteran protests receive significantly less attention in Western media and scholarship than those involving other sectors of society or causes.⁶ In many cases, protests do not attract the attention of the international media unless they are sudden and very large. But to the few of us who track veterans over the long term, pay attention to smaller cities and towns, and examine their online presence, the lack of media coverage of veteran protests is hardly news; the protests began soon after the CPC took over power in 1949, and persisted with particular ferocity during the Hundred Flowers Campaign, Cultural Revolution, and early-mid 1980s. Whereas earlier demonstrations came to light thanks to the partial declassification of archives, these days, owing to harsh censorship, one can learn about protests thanks to veterans themselves, citizen-journalists, rights protection (维权)

5. Owing to the lack of longitudinal quantitative data about veteran protests, identifying medium- to long-term trends in veteran activism is impossible. One cannot know, for example, whether more protests occurred in 2017 than in 2014.

6. Kevin J. O'Brien, "The Politics of Lodging Complaints in Rural China," *China Quarterly* 143 (1995): 756–83; and Feng Chen, "Industrial Restructuring and Workers Resistance in China," *Modern China* 29, no. 2 (April 2003): 237–62. For an early article on PLA demobilization, see Yitzhak Shichor, "Demobilization: The Dialectics of PLA Troop Reduction," *China Quarterly* 146 (June 1996): 336–59.

activists, and non-Western reporters. Surfacing online more frequently than in print, the coverage of veteran protests provides a closer-to-the-round illustration of the landscape of veterans' engagement with state than the top-heavy, post-event studies offered up by state agencies during the pre-internet era. The archives of the PRC era reflect this observation; they almost exclusively store records of government agencies only reporting what they consider to be important.

Scope

Given the geographical distribution of provinces from which the PLA has recruited its soldiers, veterans' political activism (including large and small protests, individual and collective petitioning, blogging, and filing lawsuits) has been a widespread phenomenon.⁷ According to long-standing state policy, veterans, with some exceptions, are expected to return to their place of origin (原籍), which ensures that local identity remains important to veterans' conception of their role in the polity; in many protests they hold aloft signs that read "Sichuan Veterans" or "Hubei Veterans." This policy also suggests that activism has a strongly regional flavor, taking place in provincial capitals or lower down the administrative ladder in towns (镇) and counties (县). Protests in Beijing are often escalations of protests initiated elsewhere in which people from the same county or province evaded

7. A methodological qualification is in order here. Internet-based materials often suffer from sample bias: People with problems are those who are mostly likely to take to the Internet to complain. But because of the extreme censorship of veteran protests, these accounts are often the best source one has available to discover individual veterans' experiences.

the security forces. But regional identification, which might provide the basis for mobilization, is hardly exclusive. Historically and today, many veterans move across provincial boundaries to support their comrades.

At the same time, the geography of contemporary veteran protests reflects China's military conflicts, most importantly the 1979 Sino-Vietnamese War. As a border war that developed rather quickly and did not last long, the PLA drew heavily among farmers from the south, southwest, and central military regions, recruiting many of them through promises of urban jobs in state-owned industries or elsewhere in the state sector. Upon discharge, these veterans faced significant challenges making ends meet. Close to 60 percent of a sample of 185 blog posts examined on the Voice of the Veteran website (退伍军人之声) were penned by former soldiers from these regions.

Forms

Variation in the form of protest roughly parallels diversity in location. Like many other groups that mobilize to gain something from the state or protect themselves from it, veterans deploy mixed tactics, change their methods in response to mixed signals they receive from local officials during a protest, retreat, and then strategically advance when they feel that they have an opening.⁸ Although media reports focus on public protests simply because they are highly visible, submitting petitions (as individuals

8. On state signaling in the context of protests, see Rachel E. Stern and Kevin J. O'Brien, "Politics at the Boundary: Mixed Signals and the Chinese State," *Modern China* 38, no. 2 (2012): 174-98.

or collectively) is probably more common because it is less risky. But protesting and petitioning are not mutually exclusive; failing to get responses to a petition can lead a veteran to join a protest. In a similar fashion, veterans sometimes file administrative lawsuits knowing they will be summarily rejected, but then use the case when they post their situation to a website. Veterans also write strongly worded missives to journalists, letters to the editors, university faculty, People's Congresses, and PLA generals they hope might intervene on their behalf (see table 6-1).⁹

9. Neil J. Diamant and Kevin J. O'Brien, "Veterans' Political Activism in China," *Modern China* 41, no. 3 (2015), 285.

Table 6-1. Forms of protest

Forms of Protest	Cases
Public demonstration	11
Public demonstration + petitioning	2
Petitioning	36
Petitioning + web post	8
Petition + lawsuit + web post	15
Petition + “report” 反映团	1
Petition + letter	1
Lawsuit (including mock indictments)	10
Lawsuit + newspaper + petition	3
Lawsuit + open letter	1
Petition + newspaper + people’s congress appeal	2
Publishing an open letter (to public, officials)	23
Filing a report	18
Blog post/submitting case to a website	32
Web post + contacting a newspaper	3
Contact journalist/newspaper	9
Letter to PLA/senior officials	7
Writing on the street	1
Publishing a suicide letter	1*
Letter to law professor	1
	185**
*There was a protest of hundreds of veterans nationwide as a result of this post.	
** Ten cases did not indicate a course of action. This variation in protest form, however, coexists alongside a commonality noted in most all.	

This variation in protest form, however, coexists alongside a commonality noted in most all reporting on veterans’ contentious actions: they are well-organized. Veterans’ high capacity for organization is evident

in their ability to slide across provincial borders and coordinate logistics across long distances. Having arrived at a protest site, veterans remain regimented. In addition to regional identification, veterans might situate themselves according to military branch, unit, or conflict in which they participated (Vietnam veterans, Laoshan veterans, etc.). Veterans also preselect negotiators. Whether this high level of organization is a tactical decision, an indication of the endurance of military identity, or simply an engrained militarized script for collective action (what the late sociologist Charles Tilly called a “repertoire”) is difficult to determine. From a risk calculus, orderly marches signal that protesters are peaceful. At the same time, by dressing and acting the part of the old soldier (老兵), protesters also remind officials of their past service, the promises the government made to them, and the duty to honor the elderly.

Such promises—offered as verbal commitments, in State Council documents and implicitly in the nationalistic propaganda of the Xi Jinping era—help explain the chronic nature of veteran activism. Since China lacks a veterans law that clearly stipulates what they are entitled to, veterans sometimes claim rights based on conversations with local cadres that occurred decades earlier. More so than verbal commitments, People’s Republic of China State Council policies from the 1970s, 1980s, and 1990s would seem to be a better foundation for asserting claims, but rapid economic change has rendered many policies unenforceable (for example, allocating jobs in industries that have been downsized). Perhaps the most important state commitment occurred not in a long-ago conversation or in a decades old policy document, but in omnipresent propaganda about China’s “national

rejuvenation," "dream," Made in China 2025, aircraft carriers, and Road and Belt Initiative, all suggesting that China is, or will soon be, a very wealthy and powerful state equal to the United States. Veterans reason, "Why is the government not using this wealth to help us?"¹⁰ Throwing salt on this wound, veterans read and listen to speeches given by Xi and other top leaders expressing gratitude to veterans for their service and glorifying the role of the PLA in China's liberation. Like many workers who make moralistic and debt-owed sorts of claims protesting their dismissal from factories, veterans also assert that the state made, and continues to make, implicit promises that they should be treated as valued citizens. That is, like many others in society, veterans are as likely to draw upon political, ethical, and moralistic language as often as legal and administrative.¹¹

Timing

Veteran political activism, then, has been a constant feature of the entire reform era owing to the ubiquity of promises of many sorts. That said, protests are not temporally random. Veterans select

10. "当年超期服役221名湖南贵阳农村籍老兵维权之路" [Rights campaign by 221 veterans from the Hunan and Guiyang countryside who served extended service time], September 10, 2012, http://blog.boxun.com/hero/2011/voiceofveteran/31_1/shtml (page deleted from site).

11. Feng Chen and Mengxiao Tang, "Labor Conflicts in China: Typologies and Their Implications," *Asian Survey* 53, no. 3 (May-June 2013): 559-83. For examples of how plaintiffs use this language in the context of lawsuits and discussions with lawyers, see Ethan Michelson, "The Practice of Law as an Obstacle to Justice: Chinese Lawyers at Work," *Law and Society Review* 40, no. 1 (2006): 1-38.

dates based on when the discrepancy between their daily lives and the state's overblown rhetoric about them can be publicly displayed, such as anniversaries (founding of the CPC on July 1), the convening of the National People's Congress, and PLA Day (August 1), not specific battles.¹² The security apparatus is well aware of this practice and tries, often successfully, to prevent activism, particularly in places that would attract international media attention. But the state has been less successful preventing more localized protests unconnected to the political calendar and that result from poor or failed implementation of specific policies.¹³

Such protests have gotten the state's attention. Learning from prior mistakes, during the last decade, the government has adopted a different approach toward its younger veterans: It promises very little—no secure employment or government job, land, education, rental assistance, or the like. Instead, most veterans are granted small stipends and access to job placement services, but otherwise are told they should be self-reliant. But given the highly competitive job market and the continued disdain for (mostly rural) veterans among many employers, protests among younger, unemployed, or underemployed veterans

12. Ng Yik-tung and Pan Jiaqing, "Thousands of Chinese Army Veterans Protest in Beijing," Radio Free Asia (RFA), October 11, 2016, <https://www.rfa.org/english/news/china/veterans-protest-10112016160706.html>.

13. Christopher Bodeen, "Over 2,000 Ex-Soldiers Riot in North China over Railway Training—HK Paper," Associated Press Archive, September 11, 2007, <http://www.aparchive.com/>; and Ming Pao, "HK Paper: Demobilized Soldiers-Turned-Students in Heilongjiang Clash with Police," World News Connection Databases, September 15, 2007, <https://library.udel.edu/databases/wnc/>.

are unlikely to stop. On the positive side, the widening opportunities for employment in construction projects abroad—jobs that would seem to fit many lower skilled veterans—could substantially decrease employment-related grievances.

WHO PROTESTS?

We can get a better understanding of the sources of veterans' discontent by paying close attention to the primary political protagonists in the online and street dramas taking place in China these days. Both visual evidence (videos uploaded to YouTube and photographs in newspapers and chat rooms) and on-the-scene reporting reveals the reverse of the stereotypical notions of political activism. Around the world, protests are often seen as the province of the young, whether as a result of idealism or a greater abundance of that scarce resource: time (sometimes referred to as biographical availability). In China, however, college students and people in their twenties and early thirties are not very visible in protest movements, nor are younger veterans. Instead, China's veteran activism—virtual and otherwise—stands out in the large number of fatigue-wearing, balding, graying, and getting-soft-around-the-belly, middle-aged men and those we genially refer to as senior citizens. In the first decade of the twenty-first century, some of these veterans (without their old uniforms) also participated in widespread protests as regular laid-off (下岗) pensioners.¹⁴

14. On these protests, see William Hurst and Kevin O'Brien, "China's Contentious Pensioners," *China Quarterly* 170 (June 2002): 345–60.

Research I have conducted with Kevin O'Brien has found three distinctive veteran subpopulations within this protest demographic. Veterans of the Vietnam War have been first and perhaps most visible since the onset of the economic reforms in the late 1970s (in rural areas) and late 1990s (in urban areas). Drafted in 1979, many are now in their early- to mid- sixties. Many of these men have been engaged in political activism (sometimes violently) for decades, first in the early 1980s when they suffered from high levels of unemployment, followed by protests over job losses as state-owned enterprises went bankrupt in the 1990s and 2000s, and currently because of the onset of more serious medical problems and the higher expenditures associated with them.¹⁵ Unsurprisingly, many of these veterans complain about insufficient pensions (in cases of disability) or financial aid (if they are below the poverty line), and demand that the state live up to its commitment to prevent veterans from falling below that line.¹⁶ Vietnam War veterans also protest for more emotional and symbolic reasons. Unlike its over-the-top commemorations of the CPC's so-called victory over Japan in World War II, the Chinese government has been quiet about its claimed victory over Vietnam in 1979, for fear of riling up tensions with its testy neighbor. The absence of widespread, celebratory official commemorations has prompted some veterans to organize their own, which swiftly

15. These reports first appeared in *Ming Bao* on September 12, 1981, but were later republished under the title "Zheng Wu," no. 50, Baijia Publishing. See also FBIS-CHI, December 14, 1981, W/1.

16. Ng and Pan, "Thousands of Chinese Army Veterans."

meet state repression.¹⁷ This repression has been a sore point for several decades and is unlikely to change, even if the government substantially increases its medical funding or pension payouts.

The second group of graying veterans making their voices heard quite loudly these days are men who would not officially be considered veterans in the Western understanding of the term, which is almost always applied to those who served in a strictly military capacity. In the People's Republic of China, however, owing to the notion of people's war that involved militias and other ordinary people taking up arms, as well as quasi-military/political and economic campaigns (such as building nuclear weapons, the Third Front, and Xinjiang oil fields), many have claimed this designation when seeking benefits that would help pay for medical expenses and caring for elderly parents, blurring the boundary between military and civilian spheres.

Among the blog posts we have analyzed, some 10 percent were composed by individuals somewhere on this civil-military border, including militiamen, border guards, PLA volunteers, soldiers of the People's Armed Police, railroad workers, engineers and anti-aircraft personnel (who in the 1960s and 1970s worked secretly in Vietnam in PLA logistics units), policemen, firefighters, and even forces that helped suppress the 2008 Tibetan unrest. These self-identified

17. Jiang Pei, "Protests Marking War Anniversary in China, Vietnam Disrupted," RFA, February 17, 2014, <https://www.rfa.org/english/news/china/anniversary-02172014181310.html>; and "年全体青岛籍对越战老兵要求尊严与待遇" [Vietnam War veterans from Qingdao demand respect and benefits], February 13, 2013, https://blog.boxun.com/hero/201107/voiceofveteran/50_1.shtml.

veterans, scattered all around the country, spend much of their time simply fighting for the right to gain benefits, a problem most Vietnam veterans do not have. But similar to Vietnam veterans, their grievances tend to focus on health problems and poverty (often caused by health problems) and a strong sense that they are unappreciated and have been forgotten during China's pell-mell rush into worshipping gross domestic product growth.

Joint collective action (in protests and lawsuits) between individuals on the civil-military border and Vietnam veterans has taken place, but the unclear status of some as veterans and the perception that the state's veteran allocations are limited diminish the potential for a longer-term alliance. In effect, these two groups compete for recognition and benefits. Since this could be prevented, or at least limited by a clarifying statute, keeping veteran benefits in the realm of policy, and thus leaving the criteria vague, is most likely an intentional divide-and-rule tactic, with the added benefit of saving money. Veterans are not asking for much in the larger scheme of things, and China has the means to satisfy most of their material demands if the leadership so chooses; therefore, money is most likely not driving the issue.

The third large group of gray-green veterans are online and on the streets more because of poor luck than poor health.¹⁸ Before their discharge, these men had a higher rank in the PLA than most Vietnam War veterans (ranging from staff sergeant to mid-level officers) and are, by far, the most vocal, organized, and policy-literate veterans involved in contentious

18. For a larger study of this group, see Kevin J. O'Brien and Neil J. Diamant, "Contentious Veterans: Chinese Retired Officers Speak Out," *Armed Forces and Society* 41, no. 3 (July 2015): 563-81.

action today. These veterans are also on the younger side of middle age – mainly in their forties and fifties. These veterans' poor luck struck twice. First, rather than getting sent to relatively stable positions in the state sector like some of their comrades, these veterans were transferred to large industries as military-transfer cadres (军转干部), sometimes referred to as state enterprise cadres (国家企业干部).

These veterans' second misfortune happened when their factories failed to survive in the market economy (or their managers were corrupt), while others who also had military-transfer cadre status enjoyed greater success (for example, those demobilized to strategic industries such as oil and telecommunications). When factories went under, these veterans lost their former rank and the benefits attached to it. These former officers engage the state mainly to reclaim their standing as retired military cadres, which would, in turn, restore both their status and material benefits.

The nature of these veterans' claims and the resources they bring to their activism differs from other veterans. These veterans are less interested in symbolic issues such as war commemorations. On the younger side, these veterans are also less afflicted by health concerns. More so than the other veterans, they are former insiders in the party-state-military apparatus, and thus have insider knowledge about how the government operates. These veterans are not likely to be fooled by delaying tactics or propaganda. Because of this and their good health, these veterans are seen as a greater threat to stability. At the same time, the veterans' insider status militates against highly confrontational tactics, such as violence. On the contrary, these veterans fervently profess their loyalty to the CPC, but much like many other veterans, do not

think that this profession will protect them from the wrath of local officials at home.¹⁹

STATE RESPONSES TO VETERAN PROTESTS

How does the Chinese government respond to veteran protests? Veterans, having served in the military, take propaganda about their contributions seriously (or pretend to in a serious way), and expect to be accorded respect and a certain degree of deference. But this expectation is unrealistic; local officials have long been rewarded, disciplined, or even fired based on their ability to prevent petitioners of any sort from reaching the capital.²⁰ Faced with this incentive structure, local officials pressure the security forces under their authority, who sometimes use excessive force or hire local thugs to do the same; whether one is a PLA veteran or an ordinary victim of house demolition matters very little.²¹

Mistreatment by the authorities appears to have been the cause of several recent protests. In the June 2018 protests in Zhenjiang (镇江), Jiangsu Province, over 1,000 veterans gathered from as many as four provinces (Hebei, Henan, Shandong, and Sichuan) to protest the beating of a fellow veteran at the hands of a security guard outside the municipal building

19. For a good example, see “山东潍坊约百退伍军人到天安门” [Around a hundred veterans from Weifang, Shandong arrived at Tiananmen Square], RFA, July 21, 2009 (site discontinued).

20. Yang Fan and the RFA Cantonese Service, “China’s Army Veterans Face Backlash following Mass Beijing Protests,” trans. Luisetta Mudie, RFA, October 18, 2018, <https://www.rfa.org/english/news/china/veterans-protest-10182016134348.html>.

21. For an excellent illustration of these practices, see *Petition*, directed by Liang Zhao (Bry-sur-Marne, France: National Audiovisual Institute, 2009), DVD.

when he tried to file a petition.²² In late May 2018 in Luohe, Henan, veterans took to the streets when a “former soldier’s wife had been detained by the police after she joined veterans who had gone to Beijing to demand better treatment.” Further south, veterans protested after hearing via the Protecting Rights blog site that a disabled veteran was beaten by the police.²³ Since such protests are motivated by what veterans consider violations of procedural justice—how they are treated rather than how much they get (i.e., distributive justice)—the protests are unlikely to be resolved solely through improved pensions or better jobs. Instead, the government would have to improve policing tactics vis-à-vis petitioners or change the current incentive structure, both tall orders unlikely to happen anytime soon.

Although such protests and their inevitable repression garner much attention in the media and the scholarly community, presuming that most veteran grievances are resolved in this way would be a mistake. If we look at the sample of blog posts that describe state responses (see table 6-2, which roughly covers the years 2011–13), we find that the Chinese government has been more likely to simply ignore the complaints of individual and small groups of veterans than to actively repress them, surely hoping

22. On thugs and local government, see Lynette Ong, “Thugs and Outsourcing of State Repression in China,” *China Journal* 80 (July 2018): 94–110.

23. Wong Siu-san and Lam Kwok-lap, “Chinese Military Veterans Converge on Zhenjiang as Protests Swell,” RFA, June 22, 2018, <https://msguancha.com/a/lanmu1/2018/0622/17632.html>; and Minnie Chan, “Chinese Military Veterans’ Rally for Better Welfare Ends as Armed Police Move in,” *South China Morning Post*, June 24, 2018.

that not responding will be enough to prevent further action; litigation, filing appeals, writing letters, and the like consume energy, which not everyone has in sufficient quantities. Furthermore, the government, which is willing to pay cash for peace (花钱买平安) by offering small concessions, meets with veterans during their protests without resorting to violence.²⁴ In most of these cases, local authorities deal with these issues, either because the veterans directly appeal to them, or because Beijing dispatched them back home after appearing in the capital. Most action in veteran activism, therefore, occurs at the local rather than national level.

Table 6-2. State responses to veteran activism

Modified from Neil J. Diamant and Kevin J. O'Brien, "Veterans' Political Activism in China," *Modern China* 41, no. 3 (2015), 299.

Method	Cases	%
Avoidance	94	54
Repression*	30	17
Denial**	27	15
Mixed Positive***	10	6
Accede to Request	9	5
	170	98#
* This includes threats, detentions, beatings, intercepting petitioners, kidnappings, hunting down protesters, and denying rights (such as voting).		
** This refers to refusing requests for payment, compensation, investigation, or transparency. Administrative agencies include public security bureaus, courts, state-owned enterprises, and labor arbitration committees. Also includes registering a case but then refusing to hear it.		
*** In this scenario, higher-level personnel approve the request, but local authorities refuse to enforce it.		
# Other methods include the central government sending cases back to local authorities (2); negotiation (1); and a court accepting a case but no reference to the outcome (2).		

24. Chris Buckley, "Marching across China, Army Veterans Join Ranks of Protestors," *New York Times*, June 25, 2018.

These measures (e.g., applying coercion, ignoring complaints, and relying on localities to handle problems) are not veteran-specific or new; they have been honed during the last several decades as the state confronted irate farmers, students, workers, and victims of environmental pollution and corruption. The same applies to other tactics, including automated, keyword-based surveillance of social media accounts, websites, and chat rooms, and state-funded trolling to deter and dissuade malcontents from gathering.²⁵ Recently, officials have been conducting thought work (思想工作) on petitioners' (veterans and nonveterans) relatives, friends, and employers (threatening them with sanctions should their relative/friend/employee happen to show up in Beijing or elsewhere); contracting petition social workers (信访社工) from various social work institutes to do "emotion work" among the most persistent of petitioners; and, should these fail to dissuade, selectively arresting protest leaders.²⁶ In the Xi Jinping era, these tactics have become more repressive as the state has invested in facial recognition

25. For an overview of China's censorship, see Rebecca MacKinnon, "China's 'Networked Authoritarianism,'" *Journal of Democracy* 22, no. 2 (April 2011): 33–47; and Jason Q. Ng, *Blocked on Weibo: What Gets Suppressed on China's Version of Twitter and Why* (New York: New Press, 2013). On the broader relationship between authoritarianism and media in China, see Daniela Stockmann and Mary Gallagher, "Remote Control: How the Media Sustain Authoritarian Rule in China," *Comparative Political Studies* 44, no. 4 (2011): 436–67.

26. Yanhua Deng and Kevin J. O'Brien, "Relational Repression in China: Using Social Ties to Demobilize Protestors," *China Quarterly* 215 (September 2013): 533–52; and Jieren Hu, Tong Wu, and Jingyan Fei, "Flexible Governance in China: Affective Care, Petition Social Workers, and Multi-Pronged Means of Dispute Resolution," *Asian Survey* 58, no. 4, (July/August 2018): 679–703.

technology, social credit monitoring, and other ways of using big data for social control purposes, albeit with uneven results across the country.

In March 2018, however, the Chinese government introduced something both entirely new and veteran-specific. In a break from nearly 70 years of administrative practice, but moving toward the international norm in veteran administration, the Chinese government announced the creation of a new ministry, the MVA (中国退役军人事务部), which opened for business in April 2018. Until then, veterans' affairs had been nested jointly in the sprawling Ministry of Civil Affairs and Ministry of Human Resources and Social Security – never as a stand-alone entity.²⁷ Xinhua News Agency noted that the new ministry would be led by Sun Chaoyang (a Ministry of Civil Affairs senior official without any experience in the PLA or quasi-military enterprises) and would aim to “protect the legitimate rights and interests of military personnel and their families, improve the service and management system of demobilized military personnel, and make military service an occupation that enjoys public respect,” a back-handed admission that veterans' rights under the previous system were not well-protected and people failed to afford them proper respect.²⁸ Without pointing out specific reform measures, state commentators took to the airwaves to point out that, in addition to helping the 57 million veterans currently in the system, the

27. For further elaboration on this structure, see Diamant, *Embattled Glory*, chapter 5.

28. “Sun Shaocheng,” n.d., http://www.chinavitae.com/biography/Sun_Shaocheng/full; and “China to Form Ministry of Veterans Affairs,” March 13, 2018, http://www.xinhuanet.com/english/2018-03/13/c_137035510.htm.

new ministry would improve the morale of currently serving troops who might be called upon to fight against India or the United States in the South China Sea. As noted by Song Zhongping in the *Global Times*, “if veterans aren’t respected or properly resettled, how do we talk about the dignity of our military? The establishment of a new ministry will tackle this issue and make it easier to manage veterans.”²⁹

Though the impetus for it is not entirely clear, this administrative restructuring seems to confirm an argument advanced by Christopher Heurlin that large-scale, sustained protests can lead to policy change.³⁰ Many reports surrounding the MVA focused on the frequency of veterans’ protests over low retirement benefits and unemployment resulting from bankruptcies and mergers and the threat these posed to social stability, but this is still deductive reasoning in the absence of an insider account.³¹ With close to 300,000 soldiers expected to enter the ranks of veterans thanks to the downsizing of the PLA, the government is perhaps trying to stave off more protest wavelets around the country, acknowledging implicitly that

29. Zhang Yu, “China to Improve Welfare for Veterans to Enhance Troop Morale,” *Global Times*, March 14, 2018.

30. Christopher Heurlin, *Responsive Authoritarianism in China: Land, Protests, and Policy Making* (Cambridge, UK: Cambridge University Press, 2017).

31. Zhang Yu, “China to Improve Welfare”; Frank Chen, “Veterans Affairs Ministry Set Up to Calm Disgruntled Laid-Off Soldiers,” *Asia Times*, March 23, 2018, <http://www.asiatimes.com/article/veterans-affairs-ministry-set-calm-disgruntled-laid-off-soldiers/>; and Catherine Wong, “China’s Military Veterans Ministry Opens after Pension Protests,” *South China Morning Post*, April 16, 2018, <https://www.scmp.com/news/china/diplomacy-defence/article/2141894/chinas-military-veterans-ministry-opens-after-pension>.

recent policy moves designed to pacify veterans were not working well. These failed policies included a 2014 regulation asking state-owned enterprises to reserve at least 5 percent of positions for veterans and a 2017 People's Republic of China State Council regulation stipulating that 80 percent of veterans should (rather than must) be placed in state institutions and state-owned enterprises.

At this early date, the jury is still out on whether the MVA will satisfy veteran demands and be able to provide solutions to problems that have vexed veterans for decades, or if it is largely a symbolic effort designed, like so many other projects focused on enhancing state legitimacy, to project an image of modernizing but caring leaders—while not doing much to resolve fundamental problems. Some online evidence suggests that veterans are pleased they finally have a place to call their own (comparing the MVA, which they claim to have created through their protests, to their so-called parental home). But many remain skeptical, noting (among other things) that the MVA is based in Beijing and does not have regional locations, the ways in which it will implement policy in a system where localities have so much power are unclear, its creation is a superficial solution and just postpones the resolution of the problem, and its leader is a long-serving Ministry of Civil Affairs official

responsible for many of the problems veterans are currently experiencing.³²

In my view, this skepticism is warranted. First, from a financial perspective, whether the Chinese government has shifted the burden of caring for veterans away from overburdened, often debt-ridden localities where most veterans are located (unlike, say, Shanghai, which is wealthier but has few veterans) and toward the central government and whether the practice of unfunded mandates, which has long characterized the pension system, has ended are unclear. Second, bureaucracies require power to be effective, and whether the greenhorn MVA will possess this vis-à-vis other bureaucracies (such as the State Reform Commission) and, more importantly, employers in the state and private sectors is unclear. As noted, the MVA's current minister, Sun Shaocheng, has been promoted from within the Ministry of Civil Affairs, which has never been powerful.³³ Third, no evidence exists that bureaucracy alone can solve employment, medical, and status-related problems among veterans (particularly in a quasi-market economy that values skills many veterans do not

32. “关于漯河市涉军事件的深思” [Pondering the Luohe veteran incident], n.d., <http://sdds-gov-cn.sdds-gov-cn.bbs.mc81.net/thread-1764-1-1.html> (site discontinued); “退役军人事务部的六个意想不到” [Six difficult-to-imagine things about the Ministry of Veterans Affairs], n.d., <http://sdds-gov-cn.sdds-gov-cn.bbs.mc81.net/thread-1878-1-2.html> (site discontinued); and “不能乱给老兵扣“涉黑”的帽子” [The government should not falsely claim that veterans “participate in gang activities”], n.d., <http://sdds-gov-cn.sdds-gov-cn.bbs.mc81.net/thread-1844-1-3.html> (site discontinued).

33. Sarah Zheng, “Chinese Leaders Gather for Back-to-Back Meetings after Military Veterans Protest,” *South China Morning Post*, July 2, 2018.

possess and that has historically discriminated against rural people).

History suggests that the generosity of veterans' programs hinges on the support they receive from feisty veterans' organizations, legal institutions, and civil society.³⁴ From my vantage point, China is deficient in all of these: veterans cannot legally form interest groups; the hastily authored MVA draft of a statute has a whopping 83 articles and appears to have had very little input from veterans; and, critically, veterans are isolated from other sectors of society, and little hard evidence exists of widespread social support for their cause.³⁵ Considering these issues, one can reasonably expect more of the same – surveillance, repression, co-optation – for another decade or so, by which time most Vietnam War veterans will be too elderly to engage in forceful protests.

Perhaps the best interpretation for the MVA, therefore, is the Chinese government's effort to: (1) placate at least some veterans (thereby draining the protest pool and pitting veterans against each other); (2) project a benevolent and modern image; and (3) channel discontent so that it is more easily "managed" (the term used by a military expert in the

34. This argument is developed in Martin Crotty, Neil J. Diamant, and Mark Edele, *The Politics of Veteran Benefits in the Twentieth Century: A Comparative History* (Ithaca, NY: Cornell University Press, 2020). For the US case, see Glenn C. Altschuler and Stuart M. Blumin, *The GI Bill: A New Deal for Veterans* (Oxford, UK: Oxford University Press, 2009). On Australia, see G. L. Kristianson, *The Politics of Patriotism: The Pressure Group Activities of the Returned Serviceman's League* (Canberra, Australia: Australia National University Press, 1966).

35. Minnie Chan, "China Drafts New Law to Protect Veterans' Welfare, but Will It Pass Muster?" *South China Morning Post*, July 20, 2018.

Global Times). For instance, now veterans in Beijing write to and congregate around the MVA, which could relieve pressure on other institutions, such as the PLA's General Political Department and the State Council Petition Office. For Xi Jinping, I think this alleviation of pressure would be enough in the near- to mid-term, even if it does little to alleviate the concerns about veteran treatment negatively impacting recruitment. But if China fights a war that produces massive numbers of veterans—particularly disabled ones—then leadership will surely have to go back to the drawing board.

Zooming Out

Having looked at veterans' protests microscopically, and noted their propensity to express devout loyalty to the CPC while complaining bitterly about its policies toward them, can we offer any insights about civil-military relations more generally, or even a concept as abstruse and difficult to pin down as nationalism or patriotism?

First, the Chinese government's failure to stem the protests involving an admittedly small number of veterans (given the total size) has seeped into popular consciousness and made recruiting individuals who have other career possibilities more difficult.³⁶ Veterans usually protest in public places, ensuring multiple witnesses and even more conversations around dinner tables; social media also helps spread the news (until censors catch up). Given that Xi Jinping aims to build a more technologically oriented military

36. Liu Wei, Can Mou, and Ma Zengfei, “征兵工作面临的矛盾问题及对策思考” [The thoughts on dilemmas and problems faced by drafting work], *国防* [National defense] 5 (2011): 22–23.

based on higher-quality recruits, knowledge about the poor treatment of veterans could be an obstacle to this plan. The Chinese government will have to work hard to attract these soldiers through more generous benefit packages, and even harder to make sure they are implemented at the local level. China has the resources to accomplish the former, but, to date, has not been willing to break with highly decentralized policy implementation, which is the cause for much discontent among veterans who reside in poorer areas. Likewise, officials in these areas face greater difficulty in buying off veterans by devising local compensation schemes. I anticipate future veterans will be as disappointed as many of their contemporaries unless these conditions change.

Second, the Chinese government's belated recognition that veterans merit a separate ministry, and its failure to address a core problem in veteran care, speaks to the political impotence of veterans as a political force. The CPC, led by radicalized leftist students and intellectuals for much of its history, has been wary and weary of veterans' activism since the early years of the state and has done its best to limit their power to shape political events, all while praising them profusely. This attitude toward veterans speaks to the weakness of the PLA as a lobbying force, which is the result of military, political, and economic problems, such as its violent interventions during the Cultural Revolution, the Lin Biao affair, its underwhelming performance in Vietnam, lack of representation in the Politburo's Standing Committee since 1997 (after the retirement of General Liu Huaqing), and Xi Jinping's sustained attack on many of its top officers for corruption.

In this fraught political atmosphere, the PLA will likely not make waves by insisting on a major restructuring of how its soldiers are treated after their discharge. Instead, their approach seems to be that once soldiers are discharged, they are no longer the PLA's concern. When veterans target the Bayi Building in Beijing, they seem to be imploring the PLA to intervene on their behalf. But the ease with which they are dispersed suggests civilian and domestic security personnel have the upper hand. As suggested by a high-level meeting about best practices dealing with veterans that was cochaired by two top security officials—Guo Shengkun, who serves as the director of the National Anti-Terror Work Group and is the deputy director of the National Politics and Law Commission, and Zhao Kezhi, who serves as minister of public security—stability maintenance remains the CPC's most important domestic priority.³⁷ This prioritization is reflected, in part, by a steady increase in spending in domestic security and the central state's willingness to tolerate local government's regular use of thugs to enforce unpopular and illegal policies or prevent petitioners from leaving to Beijing. From a governance perspective, veterans are just one of many troublesome (麻烦) groups that require a firm state hand.

37. Sarah Zheng, "Chinese leaders gather." On domestic security spending, see Sheena Greitens, "Rethinking China's Coercive Capacity: An Examination of PRC Domestic Security Spending, 1992-2012," *China Quarterly* 232 (July 2017): 1002-25. On thugs, see Ong, "Thugs and Outsourcing." For stability maintenance officials' perspectives on their work, see Ching Kwan Lee and Yong Hong Zhang, "Seeing like a Grassroots State."

Finally, I would argue the treatment of veterans speaks to concerns in the United States about rising nationalism in China. In this view, the Chinese government could feel pressured to do something militarily by citizens enraged (mostly online) about an affront to China's dignity, or its claim to sovereignty over disputed islands and atolls in the South China Sea. As I expressed in a Strategic Studies Institute op-ed, such worries are unwarranted.³⁸ Studies by scholars such as James Reilly and Jessica Chen Weiss have demonstrated that the CPC responds quite effectively to nationalist protests (which are sometimes a disguise for Mao-inspired grievances about inequality, downsizing, and corruption) using a flexible array of tactics, such as persuasion, negotiation, concessions, and repression, without giving too much ground, and that many such protests are organized by the government itself, either directly or with its tacit approval.³⁹ In other words, the government can manage such so-called patriots with the same aplomb as they can protesting veterans. But there is also room to question the patriotic bone fides of these seemingly aggressive nationalists. Few appear concerned with veterans of past wars, nor are they inclined to join the PLA. If veterans demonstrated their patriotism through action and sacrifice, at least according to the CPC's understanding of the concept, whether

38. Neil J. Diamant, "Op-Ed: Reflections on the 'China Threat'" Strategic Studies Institute, US Army War College Press, August 1, 2013.

39. James Reilly, *Strong Society, Smart State: The Rise of Public Opinion in China's Japan Policy* (New York: Columbia University Press, 2012); and Jessica Chen Weiss, *Powerful Patriots: Nationalist Protest in China's Foreign Relations* (Oxford, UK: Oxford University Press, 2014).

online bloggers writing from their bedrooms in their pajamas or Internet cafés about the nefarious deeds of foreign countries count as patriots is unclear.⁴⁰ Under Xi Jinping, some of these patriotic bloggers (many of whom are compensated) are appointed to official posts while others are made into celebrities. WeChat (which has over 40,000 official accounts) and Weibo have expanded under Xi Jinping's administration; the top three outlets on these platforms are official media.

Even if these bloggers are patriots, I am not convinced they are the sort of people about which the United States needs to be worried. The Chinese public today seems to be more confident about China's status as a world power that will perhaps eventually replace the United States, but rising militarism does not seem to factor into this perception. These conditions could change; for example, China could experience an economic downturn that causes widespread unemployment that proves beyond the central government's capacity to relieve through large-scale spending, and this downturn could be pinned on an aggressive and erratic foreign power. Throughout history, plenty of states have distracted their people from domestic crises through foreign adventurism.

Rather than focusing on areas of conflict, the United States would do well to support innovative programs that boost cooperation in areas of shared concern, or mutual indifference if one takes the more cynical but perhaps more realistic perspective. Like China, the United States has certainly had its share of difficulties running a large veterans administration.

40. For a scholarly debate about these issues, see Neil J. Diamant, "On Caffè Lattes, Nationalism and Legitimate Critique: A Reply to Gries, Zhang, Crowson and Cai," *China Quarterly* 210 (July 2012): 494–99.

But more positively, the US Department of Veterans Affairs has cultivated generations of knowledgeable and skilled administrators, some of whom might enjoy the opportunity to share their experiences with their Chinese counterparts now that they have accepted the premise that veterans should have their own bureaucracy. Such a policy could lead to improvements in US-Chinese relations at very little cost and risk.

On the other hand, if we are indeed entering a new Cold War, this policy will not work. For example, Taiwan's poorly run veterans' administration was thoroughly reorganized in the mid-1950s by several senior retired Department of Veterans Affairs administrators working for George Fry Consultants, based in Chicago, on a US government contract. Taiwan's veterans came to enjoy a far higher quality of life than their counterparts on the mainland, even though they lost the Chinese Civil War and the CPC won.⁴¹ I hope these potential areas of fruitful cooperation do not get lost in the fog of the forthcoming trade war.

41. Fred Riggs, *The Consulting Firm, the US Aid Agency and the Chinese Veterans Program* (Syracuse, NY: Inter-University Case Study Program, 1970); and Neil H. Jacoby, *US Aid to Taiwan: A Study of Foreign Aid, Self-Help, and Development* (New York: Praeger, 1966).

7. CULTIVATING JOINT OPERATIONS TALENT

Kevin McCauley

This chapter examines the People's Liberation Army's (PLA's) cultivation of joint talents, focusing on military educational reforms that target the development of joint commanders and staff, as well as efforts to improve joint training. Qualified joint officers and a well-trained joint force are fundamental requirements to transform the PLA into an advanced military force. The PLA's reform efforts in military education are intended to improve the quality of personnel in general, but an important emphasis of the current military educational reforms is specifically focused on joint commanders and staff. The PLA intends to instill a general level of joint knowledge throughout the entire military as joint operations capabilities are pushed down to the tactical level. Although the detailed outline of these reforms is known, the full extent and quality of implemented reforms is difficult to gauge. Continuing PLA press articles detailing problems in military education and training indicate slow progress in implementing quality reforms.

MAIN ARGUMENT

Operationalizing an integrated joint operations capability is placing new and complex requirements on joint commanders and staff and unit training. The PLA is implementing a Triad military education program that will reform military educational institutions and the joint curriculum to develop high-quality joint operations talent. The Triad system—named based on the English translation in the defense

white paper “China’s Military Strategy,” released in 2015—incorporates three components: military academy education, military professional education, and unit training practice. These three components are not new, but the current reform attempts to update and integrate them into a holistic system of systems that would create a synergistic effect between the components to cultivate the joint talents required for the PLA’s transformation. Importantly, the PLA intends to integrate closely military academic institutions with unit training, believing that the interaction will benefit both areas.

The PLA intends to improve joint training through realistic, actual-combat conditions to compensate for a lack of combat experience. An important element to improve joint training reforms is improving and standardizing unit training assessment and evaluation. Reportedly, the PLA is expanding simulation at war-gaming centers and battle labs. These facilities can provide economical training for joint commanders and staff, as well as experimentation and innovation in operational methods.

POLICY IMPLICATIONS

The PLA’s successful implementation of joint education and training reforms has significant implications as it achieves its goal of becoming one of the world’s advanced militaries. The PLA believes developing a large contingent of joint commanders and staff will take time. But the incremental improvement and expansion of joint talents should enable the gradual implementation of an integrated joint operations capability, leading to increased combat effectiveness. Even though the transformation

process will likely be long, the PLA can still be a lethal opponent—its long-range precision strike capability would be effective in this situation, for example. The PLA would especially be lethal against countries with armed forces at roughly the same development stage or that are less advanced than the PLA. But the PLA would still have to mostly rely on conducting joint coordinated operations, rather than a fully developed advanced form of joint combat. This approach could work well in smaller, shorter conflicts, but the PLA could face increasing difficulties in joint command and coordination during a longer dynamic conflict against an advanced military.

INTEGRATED JOINT OPERATION REQUIREMENTS

President Xi Jinping's current reform effort has, in part, prioritized implementing the key twin capabilities of integrated joint and system-of-systems operations. These theoretical concepts impose new joint requirements on commanders and staff, necessitating the PLA's emphasis on cultivating joint talent and improving joint training. These joint command requirements include decentralized command, complex coordination, the employment of joint modular task forces, employment of modern informationized weapons systems and equipment, the execution of joint tactical actions, and the creation of new innovative operational concepts.

The successful implementation of integrated joint and system-of-systems operations will require a high level of joint command and staff skills, as well as realistic joint training to operationalize new joint concepts. The future operations the PLA envision

will place great stress on joint commanders and their staffs at all echelons to control and coordinate forces dispersed across a vast battlespace while conducting complex operations. These operations require a high level of integration of forces, reconnaissance and intelligence, and weapons systems. The requirement for a rapid sensor-to-shooter time line places a burden on the observe, orient, decide and act loop for rapid information transmission, analysis, and decision making on a fast-paced battlefield. The restructuring of task force groupings during an operation will require extensive practice during exercises. New, integrated, joint command systems require more highly developed technology skills, computer literacy, and training on the new systems than in the past. The development of joint tactics and joint tactical force groupings will also require joint skills and training down to the tactical level.

PLA-IDENTIFIED PROBLEMS RELATED TO JOINT TALENT DEVELOPMENT

The PLA has identified numerous significant problem areas in the cultivation of joint talents that need to be addressed. President Xi has stated the development of joint command personnel is an urgent priority to address the shortage of qualified personnel. In 2018, the PLA continued to view the general quality of officers and men at all echelons as inadequate, especially joint commanders and staff. Additional resources are needed to develop the specialized skills in core competencies to conduct modern joint operations and support the broad modernization effort. The personnel evaluation and selection process requires improvements to correct significant problems,

as evidenced by press reporting on PLA corruption cases related to promotions and recruitment.¹

The PLA has identified numerous problems in military academic institutions, including:

- outdated courses and instructors who are out of touch with modern operational concepts;
- poor discipline and management;
- lack of innovation;
- fraud and corruption polluting the academic environment and diverting funds and resources;
- the need for improved regulations on joint military education and training;
- poor coordination between military academic institutions and units;
- lack of adequate funding for military education;
- difficulty arranging research exercises; and
- a requirement for top-level design for the high-level, holistic planning and management of military education reforms.²

1. Yao Jianing, "Senior Official Urges Deeper Military Graft Inspections," *Xinhua*, July 16, 2014, http://eng.chinamil.com.cn/news-channels/china-military-news/2014-07/16/content_6049536.htm; General Political Department Editor, 习近平关于国防和军队建设重要论述选编 [Selection of important expositions of Xi Jinping on national defense and army building] (Beijing: PLA Press, 2014), 120, 188; and Ma Qingtao and Liu Huating, "以习近平强军思想为引领大力培育高层次复合型军事人才" [Vigorously cultivate high-level interdisciplinary military talent under the guidance of Xi Jinping's thought on strengthening the military], *中国军事科学* [Chinese military science] 1 (2018): 36.

2. General Political Department Editor, Selection of important expositions, 119-23, 182-94, 224; and Hu Limin et al., 军事人才联合教育论 [On the joint education of military personnel] (Beijing: National Defense Industry Press, 2017), 139-40, 169.

In June 2018, the Central Military Commission's (CMC) Training and Administration Department (TAD) continued to report violations in the military educational system involving teaching and management problems.³ President Xi has accused the military academic institutions of the four winds (四风), namely formalism, bureaucracy, hedonism, and waste. He believes reforms will be a difficult struggle that must be won.⁴

The PLA uses the slogan translated as the “five incapables” (五个不会) to describe command deficiencies in some officers. The five problem areas do not accurately assess the situation, understand the superior's intent, make accurate combat determinations, properly deploy troops, and adequately deal with emergencies. □ Improved command and staff education, training, and job certification are required to overcome these deficiencies.

Military reform efforts emphasize improvements in training, especially joint training, to approach actual-combat conditions. The requirement for actual-combat training is to overcome the lack of recent PLA combat experience and a peacetime mentality permeating the force. To improve training, the PLA believes it needs to

3. Li Yun and Gai Yulin, “中央军委训练管理部通报 22 起违反院校教育制度规定问题” [The Central Military Commission Training and Management Department reported 22 violations of the educational system of the universities and colleges], *Xinhua*, June 24, 2018, http://www.xinhuanet.com/2018-06/24/c_1123028143.htm.

4. General Political Department Editor, Selection of important expositions, 159–61.

- continue to upgrade large training bases, simulation centers, and battle labs to support joint training and experimentation;
- focus on rigorous and complex joint training;
- improve opposing force training;
- focus training on wartime missions;
- eliminate its indifference to realistic training and its fear of accidents, which limits training intensity; and
- standardize evaluation methods to eliminate the falsification of training results and accurately gauge unit combat capabilities.⁵

JOINT EXERCISE EXPERIENCE

The PLA has conducted increasingly complex joint exercises for the last two decades, including the incorporation of campaign and tactical joint formations. The disbanded Jinan Military Region was tasked with conducting experimental joint training during the first decade of the twenty-first century. This joint training has likely built up a group of commanders and staff with some understanding of the problems and requirements of complex joint operations. This understanding does not equal combat experience, but at least some officers in the PLA likely

5. Yu Qifeng, “破解‘五个不会’难题要从源头入手” [Crack the “five incapables” starting at the source], *PLA daily*, October 13, 2015, http://www.81.cn/jfjbmap/content/2015-10/13/content_125880.htm.

understand the complexities and requirements of joint operations based on their experience in joint exercises.⁶

REFORMS TO CULTIVATE JOINT TALENT

The PLA has researched the education and training of joint operations officers, beginning as early as the mid-1980s, and with increased focus since the 1990s. The PLA's analysis concludes that new, high-quality military talents will play an increasingly important and decisive role on the informationized battlefield. The PLA also assesses that there is currently a deficit in military personnel that are skilled in integrated joint operations and informationized warfare. The current military educational reforms emphasize joint operations and information technology. Importantly, the PLA continues to believe that man is the decisive factor for victory on the battlefield, reinforcing the importance of developing high-quality joint personnel.⁷

Background

- The PLA has focused on improvements to military education for more than three decades, with increased emphasis over the last two

6. Zhang Tao, "Chinese Army to Raise Military Training Standards," *Xinhua*, November 15, 2013, http://eng.mod.gov.cn/DefenseNews/2014-03/20/content_4498796.htm; Li Xingzhu et al., *基于信息系统的体系作战能力建设100问* [Information system-based system-of-systems operational capability building in 100 questions] (Beijing: NDU Press, June 2011), 218, 230; and General Political Department Editor, *Selection of important expositions*, 21–22, 32, 60–62, 158, 217–18.

7. Kevin McCauley, *PLA System of Systems Operations: Enabling Joint Operations* (Washington, DC: Jamestown Foundation, February 28, 2017), 50–75.

decades. The PLA views improving military education as providing a foundation for military modernization, forming a pool of high-quality military talent, and preparing for combat. Highlights of the current reform efforts include the following occurrences.

- The PLA issued two documents covering the period from 2000 to 2020 to cultivate military talent and realize an informationized and innovative education system: the 2000 Central Military Commission “Outline on the Reform and Development of Military Academy Education (2000–2010)” and the 2012 CMC-issued “Outline on Military Academy Education Reform and Development Plan before 2020.”⁸
- In August 2003, the CMC issued the 20-year Strategic Project for Talented People (军队人才战略工程) to build up a contingent of command officers capable of planning and directing informationized wars.⁹
- In October 2008, four documents were released to improve the education and training of joint operations command talent. This effort aimed at increasing joint training, developing joint

8. Wu Qingli, 基于信息系统的体系作战能力理论探索 [Exploration of information systems-based operational capability theory] (Beijing: Military Science Press, 2011), 6–7; and “30年军队干部队伍和人才建设创新发展” [30 years of military cadre ranks and talent building innovative development], *PLA daily*, December 30, 2008, <http://mil.news.sina.com.cn/2008-12-30/0720536852.html>.

9. Liu Fengan and Yang Xuguang, “2020年前军队院校教育改革和发展规划纲要” [Outline of education reforms and development plan for military academies by 2020], *Xinhua*, June 4, 2012, http://www.gov.cn/jrzq/2012-06/04/content_2152816.htm; and Limin et al., On the joint education, 37–38.

operations course materials and teaching staff, integrating military educational institutions and unit training, encouraging innovation in teaching and training, and improving the assessment and evaluation system.¹⁰

- The former General Staff Department in 2012 issued two additional documents to clarify and standardized the content and methods for training joint operations command talent in the informationized era.¹¹

Current Military Educational Reforms

In early 2016, the CMC issued the “Opinion on Deepening National Defense and Military Reform,” with the current reforms scheduled to be completed between 2017 and the end of 2020. The opinion proposed deepening the existing Triad New Military Talent Education System of Systems (三位一体新型军事人才培养体系), which is composed of three programs that develop military academy education, unit training practice, and military professional education. None of the three components of the Triad system are new, but the ongoing reforms update and fuse the three systems to create a synergistic effect. The new education system of systems further integrates military educational institutions with unit training to provide cross fertilization. The opinion also adjusts

10. Information Office of the State Council, “China’s National Defense in 2004” (white paper, Information Office of the State Council of the People’s Republic of China, December 2004).

11. “解放军总部下发文件加强联合作战指挥人才培养” [Document issued by the People’s Liberation Army headquarters to strengthen the training of joint operations command personnel], *Global Times*, October 15, 2008, <http://mil.huanqiu.com/china/2008-10/252499.html>.

and optimizes the scale and structure of the military academic institutions and continues “civilian military integration” to support the improvement of military education.¹² The PLA believes it is important to focus on joint commanders and staffs and popularize and improve joint operations knowledge and education throughout the force.¹³

The PLA considers the National Defense University (NDU) as the one joint military educational institution, although the National University of Defense Technology (NUDT) and service colleges provide some joint courses. The theater commands have initiated on-the-job training programs and certification for joint personnel. The PLA intends to create a virtual joint command college with online courses and learning resources.

National Defense University

The China’s National Defense in 2004 white paper describes basic command colleges providing joint operations basic training, intermediate command colleges providing combined arms training, and advanced command colleges providing strategic research and joint campaign training. The NDU was established in 1985 as an advanced command college providing strategic research and joint campaign training. The NDU lay the organizational foundation

12. Limin et al., On the joint education, 18.

13. Wang Dongming, Wang Jingguo, and Mei Changwei, “中央军委《关于深化国防和军队改革的意见》 [Central Military Commission’s “Opinion on deepening national defense and military reform”], *Xinhua*, January 2, 2016, http://www.gov.cn/zhengce/2016-01/02/content_5030168.htm; and Limin et al., On the joint education, 7.

for cultivating joint operation command talent. The university also has a war-gaming center for strategic and campaign confrontation exercises.¹⁴

The NDU includes the Joint Operations College, which sends experts to field training to provide guidance to units. Also, the NDU established an All-Army (Joint) Operations Knowledge Learning Network Training Platform and a Joint Operations Command Talent Network Education Platform to promote online training by the entire military. The two platforms offer an open and collaborative environment with a variety of educational programs to meet miscellaneous educational requirements. The *PLA Daily* has reported on units using the All-Army (全军) platform.¹⁵

The NDU has initiated a series of measures to improve joint talent, including the following.¹⁶

14. Limin et al., *On the joint education*, 40–43; and All-Military Military Terminology Management Committee, *中国人民解放军军语* (People's Liberation Army military terminology) (Beijing: Academy of Military Science Press, 2011), 323–24.

15. Information Office of the State Council, "China's National Defense in 2004"; and Yu Dongbing, *联合训练学教程* [Lectures on the science of joint training] (Beijing: Military Science Press, 2013), 36.

16. Limin et al., *On the joint education*, 49–51, 59; Lai Wenyong, "第31集团军团以上党员干部手机里装上了客户端" [Party members of the 31st Group Army and above have installed clients in their mobile phones], *PLA daily*, November 2, 2015, http://www.81.cn/jwgz/2015-11/02/content_6748927.htm; Zhang Shuo, "@指挥员 远离套路! 大漠演兵需要多种战法预案" [@Commander stay away from routines! Desert exercise needs multiple tactical plans], China Military Online, September 12, 2017, http://www.81.cn/jwgz/2017-09/12/content_7752193.htm; Information Office of the State Council, "China's National Defense in 2004"; and "30 years of military cadre ranks."

- In 2009, the NDU provided one- to two-year training classes for joint operations commanders and reportedly launched a new generation of joint courses.
- In September 2014, the 44th joint command class added six new joint disciplines.
- In spring 2016, the 46th command class began a one-year program divided into two majors: joint operations command and leadership management.
- The NDU has constructed 14 new training facilities, including a joint battle lab (联合作战实验室) with a war-gaming system for confrontation exercises.
- The NDU organizes training at command colleges and training bases and conducts a master teacher (名师工程) project to bring in instructors with unit experience and dispatch professors to units, as well as offer study abroad and conduct research projects to improve teaching staff.

In August 2017, the PLA announced the NDU had trained more than 1,000 joint operations commanders in the past five years. The PLA announced the graduation of the first phase of the joint post qualification training course in August 2018. The joint operations command track is designed to address problems in joint operations command development. The course includes all-domain, multidimensional, joint operations; informationized local war; national defense economy; and preparation for military struggle. Nearly 200 students passed the graduation assessment with qualification certificates. The training began in October 2017 and lasted nine months. A

second class began in April 2018, and the course will be assessed to identify problem areas requiring further refinement. The new joint course will be held once or twice a year.¹⁷

National University of Defense Technology

The NUDT provides joint support courses, including six specialty tracks and 14 joint operations support courses. The NUDT provides technical support for the military professional education platform.¹⁸ President Xi identified senior officers as having limited knowledge of high-tech systems, even though they command units equipped with modern equipment. This remark resulted in the NUDT assuming a role in officer training to address

17. Wang Yitao, “国防大学：新型联合作战指挥人才方阵在这里崛起” [National Defense University: New joint operations command talent phalanx rises sharply], *Xinhua*, July 10, 2017, http://www.81.cn/jwgz/2017-07/10/content_7671060.htm; and Zhou Chao and Luo Jinmu, “国防大学集中精力履行核心职能” [National Defense University concentrates on fulfilling core functions], *PLA daily*, August 30, 2017, http://www.81.cn/jfjbmap/content/2017-08/30/content_186762.htm.

18. Shen Peng and Wu Xu, “我军联合作战人才选训考用蹚出新路” [Our army’s new way for joint operations talent selective training and evaluation], *PLA daily*, August 7, 2018, http://www.81.cn/jfjbmap/content/2018-08/07/content_212718.htm; Huang Panyue, “PLA Aims to Cultivate Commanding Talents for Joint Operations,” China Military Online, September 7, 2017, http://english.chinamil.com.cn/view/2017-09/07/content_7747234.htm; and Liu Junmu, “国防大学聚焦备战打仗培养联合作战指挥人才纪实” [The National Defense University focuses on preparing for war and training joint operations command talent], China Military Online, May 22, 2018, http://www.81.cn/jfjbmap/content/2018-05/22/content_206747.htm.

the lack of scientific and technical knowledge.¹⁹ The NUDT is seemingly important in supporting reforms to develop joint talents. A faculty trained in science and technology likely positions the NUDT to play an important role in educational reforms.

Theater Commands

The theater commands created in 2016 represent new joint command organizations, force structure, missions, and functions. The joint operations command center in each theater is the primary organization for conducting operations in their theater's strategic direction. The theater joint commands conduct joint training during peacetime and command joint operations in wartime or during nonwar operations. Theaters play a role in developing and administering joint command personnel qualification assessments.²⁰

The service personnel assigned to theater commands have demonstrated unfamiliarity with joint operations and joint command. During a visit to the Southern Theater Command in October 2018, President Xi noted that the command capability was not strong in citing problems with command

19. Chen Zhen and Guo Zhenyu, "国防科技大学国际关系学院联合作战保障课程再增14门" [NUDT's International Relations Institute joint operational support increases 14 more courses], *PLA daily*, April 3, 2018, http://www.81.cn/jfjbmap/content/2018-04/03/content_203092.htm; and Ni Haixu, "军委机关有关部门专家解读我军军事职业教育" [Interpretation of our army's military professional education by experts from relevant departments of the Central Military Commission], *PLA daily*, March 1, 2018, http://www.81.cn/jfjbmap/content/2018-03/01/content_200638.htm.

20. General Political Department Editor, Selection of important expositions, 188-89.

personnel, the command information system, and joint training. Theater commands have exhibited growing pains since their establishment primarily the result of officers with limited joint experience. Although selection for theater commands requires a minimum of two years' headquarters experience at the group army level or above and participation in large-scale, joint exercises, officers are not prepared for joint staff duty. The theater commands will likely take several years to overcome the joint staff shortcomings and become fully functional joint operations commands. This lag does not mean the theater commands cannot conduct joint operations; instead, it means it will take time to reach an optimal joint operational effectiveness. At their establishment, the theaters formulated a three-year program to train a contingent of competent joint operations command personnel. Joint operations command center exercises have also provided in joint command and coordination of forces.²¹

The theater command party committees appear to be developing joint operating regulations and procedures based on CMC guidance. The theaters are developing joint command procedures that govern various command levels, area-specific requirements,

21. Liu Jianwei, Liu Lei, and Zhao Lei, “透过战区改革发展新成就领悟习主席“7·26”重要讲话精神” [Develop new achievements through theater reform comprehending the spirit of Chairman Xi's “7·26” important speech], China Military Online, September 3, 2017, http://www.81.cn/jwgz/2017-09/03/content_7741437.htm.

level-by-level and skip echelon command, and theater and service command functions.²²

Triad System Military Educational Reform

President Xi recently stressed the need to accelerate the construction of the Triad military education and training system aimed at cultivating joint operations command talent identified as a strategic resource.²³ The Triad system provides a building-block approach to training joint officers at increasingly complex levels. The system represents an attempt by the PLA to update and modernize education and training programs to meet the requirements of integrated joint operations and system-of-systems operations. Also, the Triad system reform represents the PLA's desire to better integrate education and training programs to create new synergies, share resources, and

22. Wang Ting, “中部战区起步开局大力提升联合作战指挥能力” [The central theater begins to vigorously promote joint operations command capability], *Xinhua*, April 1, 2016, http://www.xinhuanet.com/mil/2016-04/01/c_128857500.htm; Du Shanguo and Wang Qinghou, “让备战打仗成为唯一状态” [Let war preparations be the only state], China National Defense Network, June 16, 2016, http://www.81.cn/jfjbmap/content/2016-06/16/content_147808.htm; Liu Jianwei, “联战联训，千军万马看指挥” [Joint training and teaching, thousands of troops command], *PLA daily*, May 5, 2016, http://www.81.cn/jfjbmap/content/2016-05/05/content_143593.htm; and “加快把指挥能力搞过硬” [Accelerate good command capability], *PLA daily*, October 27, 2018, http://www.81.cn/jfjbmap/content/2018-10/27/content_219136.htm.

23. Shanguo and Qinghou, “Let war preparations be.”

cross-fertilize innovation and knowledge.²⁴ The Triad system’s components—military academy education, unit training practice, and military professional education—represent an attempt to improve and integrate the education and training system to better support the cultivation of military talent in general, with a specific focus on joint talent. Figure 7-1 shows a graphic representation of this model.²⁵

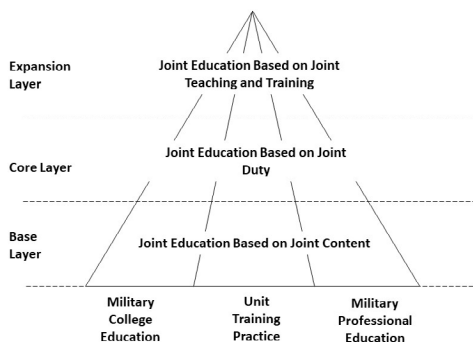


Figure 7-1. Basic system-of-systems model of military talent joint education

In 2018, the PLA continued to assess many continuing problems with the development of joint military talent that the reforms must surmount. Military educational institutions problems continue with outdated policies remaining, a weak linkage between military colleges and unit training,

24. Wang Shibin, “习近平出席中央军委党的建设会议并发表重要讲话” [Xi Jinping attended the Central Military Commission party-building conference and delivered an important speech], *Xinhua*, ed. Li Pengfang, August 20, 2018, http://www.81.cn/syjd/2018-08/19/content_9256949.htm.

25. Teach Beecham, “新时代军事职业教育大有可为” [Military professional education in the new era is promising], *PLA daily*, November 6, 2018, http://www.81.cn/jfjbmap/content/2018-11/06/content_219948.htm.

inadequate unit training, waste and lack of resources, and an underdeveloped joint education system. The construction of military professional education platforms continues to have insufficient online resources and poor incentives to promote continuing education. The traditional mindset must be broken to achieve successful implementation of a long-term plan for developing joint talent throughout an entire military career. The PLA needs to build up a unified leadership, resolve interdepartmental problems, and integrate education and training across the military to fully implement the Triad system.²⁶ The PLA's assessments of the status of joint education and training appear to make the projections for reform completion by the end of 2020 unrealistic, unless the 2020 goal addresses only the downsizing and reorganization of the military educational institutions.

Military Academy Education

Military academy education (军队院校教育) is the main channel for improving the quality of military personnel and teaching basic knowledge and skills. Military academic institutions need to promote innovative minds and thinking abilities to lay the foundation for long-term talent development. The PLA intends to make military academic education consistent through a three-tier, four-level (三层四级) standard for command officers, which includes uniformity of the teaching outline and talent

26. Cai Linlin, "探索'三位一体'育才的核心要冲" [Exploring the core importance of the "Triad" talents education], *PLA daily*, April 10, 2018, http://www.xinhuanet.com/mil/2018-04/10/c_129847159.htm.

training program, class standards, and other education system specifications.²⁷

The PLA wants instructors to have a strong understanding of military theory and practical military experience. Publications by the PLA discuss a regular rotation system based on their examination of the US Military Academy at West Point, where instructors rotate from units to teach at the academy. The intention is to create a “teacher-expert-commander” type of faculty to enable students to access high-end knowledge. This system would allow military educational institutions to better incorporate unit training requirements into courses.²⁸ But bringing officers from units to serve as instructors for the program has seemingly been abandoned because officers participating in the rotations failed to be promoted.

Unit Training Practice

Unit training practice (部队训练实践) is critical to enhance the capability to fight and win, as well as an important basic program to develop command officers. Please note, the PLA states “unit training practice” has acquired a specialized meaning, although a consistent definition is not available. The term “practice” signifies the consciously transformative nature of the training.

Comprehensive exercises integrate personnel and equipment, transform theory into practice, and place the classroom in the battlefield. The PLA believes that in order to improve joint education, military education needs to move closer to unit training, focus on

27. Cai, “Exploring the core importance”; and Limin et al., *On the joint education*, 55, 65.

28. Limin et al., *On the joint education*, 166, 172.

actual-combat training, and form a seamless linkage between military educational institutions and units.²⁹

Joint Teaching and Training

Joint teaching and training leverage the military education institutions and provides joint coordination between military academic institutions and units. Joint teaching and training use military educational institutions teaching and research to support unit training.³⁰

Joint teaching focuses on the joint development talent program and joint training focuses on unit actual-combat training. The PLA intends to emphasize standardization of joint teaching and training including participation of military academic institutions and units in joint exercises. An example is deploying instructors and students to conduct on-site teaching and participation in the military unit training. At the same time, troops go to the military educational institutions to teach and participate in seminars. The PLA believes this system will optimally use military resources and provide cooperation between military education and training to improve unit actual-combat training and enable students to absorb the latest military training methods.³¹

The Joint Teaching-2012 Queshan (联教-2012 确山) exercise was directed by the former General Staff Department and lead by the Shijiazhuang Army Command College at the Queshan Combined Arms Training Base. The exercise included a joint tactical

29. Cai, "Exploring the core importance"; and Limin et al., On the joint education, 55, 65.

30. Limin et al., On the joint education, 48.

31. Limin et al., On the joint education, 49-50.

formation and 19 military educational institutions showcasing the integration of education and training. The PLA considered this the first multidimensional joint teaching and training exercise.³²

Military Professional Education

The TAD's Professional Education Bureau provides top-level design (顶层设计) for military professional education (军事职业教育). In August 2017, the CMC issued the Military Professional Education Reform Implementation Plan, launching the reform of this component of the Triad system. The plan includes the Network Plus Education program for the sharing of resources and provision of online learning. A pilot project within the military was implemented within 24 units to be completed by the end of 2018. The PLA plans to promote military professional education during 2019, with a planned realization of this component of military educational reforms by the end of 2020. The overall program includes leveraging civilian educational resources as well as continuing assessment and revision of the program as needed.

The PLA believes military professional education boosts military talent, improving performance and professionalism. Individual learning activities and high-quality network education resources that rely on technological innovation can reshape military professional education to better support joint education as the age of intelligent technologies impacts

32. McCauley, *PLA System of Systems Operations*, 47.

military affairs. The aim is to create a joint command college without walls.³³

Ubiquitous Learning: Online, Open, and Continuing Military Education

Previously, most PLA military education was limited to the classroom. Courses were criticized as not being innovative or directly relevant, with military personnel described as having passive learning habits. The PLA intends to apply innovative methods to improve military education, including lessons from civilian and Western education. The PLA is addressing the issues of innovation and interactive and continuing education with a massive open online course program. The online platforms support sharing of resources and expertise between the military educational institutions. The continuing military education is to adapt to and support a military career development ladder.³⁴ The Dream Course Learning Platform (梦课学习平台) is a large-scale, open, online course platform that is open to all officers and men in the PLA supporting the Triad system.³⁵

33. Liu Jinghang, “全军军事职业教育工作” [All-army military professional education work], *Xinhua*, November 25, 2017, http://www.xinhuanet.com/mil/2017-11/25/c_129749290.htm; and Shi Ge, “军事职业教育互联网服务平台测试运行” [Test and operation of internet service platform for military professional education], *Xinhua*, November 16, 2017, http://www.xinhuanet.com/2017-11/16/c_1121967603.htm.

34. Cai, “Exploring the core importance”; and Limin et al., *On the joint education*, 55.

35. Limin et al., *On the joint education*, 51–52.

Cross-Training

Beginning in 2003, the PLA began placing personnel across services and branches to gain experience. The section in “China’s National Defense in 2004” on the strategic project for talent discusses cross-training as a method for cultivating high-caliber, joint talent.³⁶ Cross-service training continues, with recent reports of officers being assigned to other services to gain joint experience.³⁷

Construction of a High-Quality Military Faculty Team

President Xi has identified the problem of military faculty lacking knowledge of joint operations and other advanced skills to meet the needs of cultivating joint talents. Although the PLA believes the military faculty has shown improvements, problems remain.³⁸ Developing a skilled and innovative faculty and providing relevant joint courses and teaching materials at military educational institutions are fundamental requirements in the PLA’s quest to build a group of joint commanders and staff. The PLA believes the

36. NUDT, “梦课”学习平台，万人超级课堂等你加入！” [“Dream Course” learning platform, thousands in super classroom waiting for you to join!], China Military Online, ed. Li Xian, October 25, 2016, http://www.81.cn/2016rmxzjxs/2016-10/25/content_7323791.htm; and Limin et al., On the joint education, 51.

37. Information Office of the State Council, “China’s National Defense in 2004”; and “30 years of military cadre ranks.”

38. Li Wenji, “百日内5名将军密集跨军种 ‘转战,’ 均在近两年调整过岗位” [Five generals in the 100-day intensive cross-service “battle,” they have adjusted positions in the past two years], paper, July 30, 2018, https://www.thepaper.cn/newsDetail_forward_2304212.

military faculty are critical for imparting knowledge and mentoring and fully mobilizing the enthusiasm, initiative, and creativity of students. Other important missions of the military teaching staff are to conduct research in military science and to be innovators in the development of military theory, technology, and teaching methods.³⁹

Proposals to improve military faculty have been made, but whether the proposals have been implemented is unknown. General proposals include strengthening teachers' dedication, virtue, sense of responsibility, and understanding of new educational theories through improved courses and independent learning for instructors. One proposal is to increase the opportunity for instructors to study abroad, particularly in foreign military academies. The PLA also recognizes the need to adjust the faculty structure with a more even distribution of young, middle-aged, and older-aged teachers to create a stable faculty system in addition to adding teachers with both military experience and advanced academic credentials.⁴⁰

Ultimately, one of the proposals that might achieve the greatest success is the implementation of a strong reward-and-punishment mechanism based on an accurate evaluation system. The PLA contends this would create a "survival of the fittest" system. A punishment system would provide a tool for culling inferior teachers, but apparently this has not occurred. A strong reward system would both recognize gifted

39. Li Cheng An, 新形势下军队院校教育改革 [Reform of military university and college education in the new situation] (Beijing: NDU Press, October 2015), 142.

40. Li, Reform of military university, 136-37.

teachers and instill greater enthusiasm and incentive to excel and innovate.⁴¹

Military Educational Institution Evaluation

The PLA believes an effective evaluation system can promote high-quality military educational institutions. The process of collecting data on military educational institutions also supports reform efforts by identifying problem areas and possible solutions. As of 2015, no comprehensive evaluation system was in place. Evaluations of military educational institutions began in the early 1980s, with an experimental exploratory stage from 1986 to 1995, followed by continuing refinement to the present. The Regulations on PLA Academy Education in 2000 stipulated the establishment of an evaluation system to support improving the quality of personnel education. Since 2005, 22 military educational institutions have received evaluations in a pilot program.⁴²

Joint Military Talent Requirements and Evaluation

The PLA is developing standards to ensure quality control in joint command education. The PLA is proposing the three-tier, four-level structure for command officer cultivation. The transformation process for joint command officers is from theory to practice, from basic knowledge to specialized knowledge, and from branch and arms to joint command and operations. The establishment of joint command quality standards affects both the quality of joint officers and staff and the quality of military

41. Li, Reform of military university, 147–58.

42. Li, Reform of military university, 158–59.

educational institution course content. The PLA has developed the “four have” (四有) for the new generation of revolutionary soldiers: have spirit, have capability, have courage, and have integrity. The PLA believes the traditional concept of quality and capability evaluation standards must be replaced by qualities highlighting informationized warfare system integration, information fusion, and other requirements to master modern combat theory and operational methods.⁴³ The structure of the three-tier, four-level system is depicted in graphic form in figure 7-2.⁴⁴

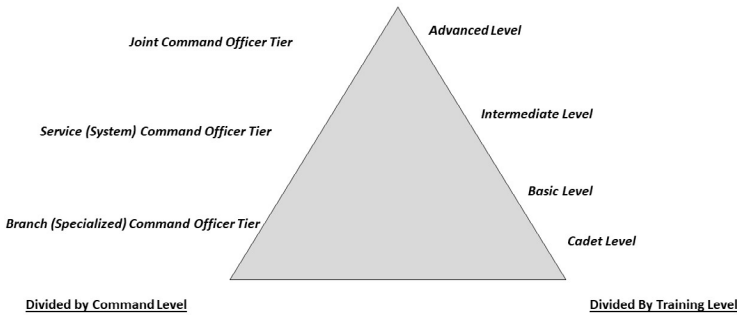


Figure 7-2. Three-tier, four-level structure for command officers

Military Education Management

The TAD provides top-level design plans and implements the Triad system strategic plan for standardization of joint education and training by establishing the basic framework and contents. The CMC and the services provide a two-level management

43. Li, Reform of military university, 233–47.

44. Limin et al., On the joint education, 58–64.

system for the military education institutions. This high-level direction includes establishing norms for military educational curriculums. Each syllabus contains training objectives and requirements, main course subjects and content, and assessment criteria. The current focus is accelerating the construction of teaching for joint operations and deepening comprehensive training reform. Military educational institutions will actively participate in teaching and training joint forces and conducting joint exercise simulations. Objectives include accelerating the expansion of simulation centers, establishing specialized laboratories for research, upgrading training bases, conducting research on new methods of joint training and exercise design, and eliminating academic misconduct.⁴⁵

The TAD's Professional Education Bureau is responsible for centralized management and supervision of the Triad system military professional education program. The bureau supervises joint professional development in the theaters and services.⁴⁶ Centralized support for the Triad system program is provided by the following documents: *Outline for College Education Teaching* provides an overall plan and requirements for military education, *Outline for Unit Training Practice* provides integrated requirements and evaluation for military unit

45. Limin et al., On the joint education, 60.

46. Limin et al., On the joint education, 12-13, 23, 140-41; Management Committee, People's Liberation Army military terminology, 300; and Zhang Zhibin and Wu Xu, "适应全民终身学习时代要求助力官兵成才" [Adapt to lifelong learning for all the times require helping officers and soldiers to become talented], *PLA daily*, October 31, 2018, http://www.81.cn/jfjbmap/content/2018-10/31/content_219474.htm.

training, and *Outline for Military Professional Study* provides planning and requirements for professional education programs.⁴⁷

Joint Training Reform

The PLA is reforming joint unit training to build toward an integrated joint operations capability. The reform of military education connects with joint training enhancements as the PLA attempts to build a synergy by integrating military education and training. Integrated joint operations are conducted at three levels: strategic, campaign, and tactical. The PLA is focusing on improving joint tactical training (primarily at the division or brigade level) because the organization intends to push joint combat down to the tactical level and employ integrated, joint tactical formations. Improved and accurate training evaluations are intended to enhance the quality of joint operations capabilities through training that approaches the conditions of real combat. Most importantly, the PLA's training is based on wartime missions in each theater; thus, the organization believes improved and realistic joint training can support modifications and help to perfect operational plans.⁴⁸

Joint campaign training's primary purpose is to develop commander and staff knowledge of theory, organization, and command capabilities during joint campaign formation exercises. The significance of the joint training focus on commanders and staff is reinforced by the military educational reforms to develop joint command talent. The PLA believes command and organization of joint forces represent

47. Limin et al., *On the joint education*, 152–53.

48. Limin et al., *On the joint education*, 153.

the greatest training difficulty. Strategic training is focused on high-level mastery of warfare principles and methods for strategic commanders and staff and national security related institutions. Exercises, seminars, and lectures focus on strategic planning, national security policy, and military strategic decision-making problems. Specialized joint training emphasizes that basic capabilities should include operational elements, such as reconnaissance and intelligence, command and control, and information coordination and confrontation. In addition, joint training can involve nonwar joint operations, the testing of new weapons and equipment, and experimental exercises that test new concepts.⁴⁹

Joint training should also focus on joint campaign and tactical formations' command, coordination, composition, and restructuring during changes in operational phases. The employment of a modular approach in forming a campaign and tactical operational system of systems should be an important component of joint training.

High-Level Training Direction

High-level organizations are beginning to provide unified leadership and management over joint training. The TAD establishes requirements for actual-combat (实战化) training. Actual combat is warfighting-oriented training that approaches the environment and conditions of real combat to overcome the lack

49. Dongbing, *Lectures on the science*, 56, 96-97; Zhu Aihua, *联合战术训练 [Joint tactical training]* (Beijing: Tide Publishing House, 2008), 50-51; and Zhang Hui, *信息时代军事训练论 [On military training in the information age]* (Beijing: NDU Press, 2016), 234.

of combat experience and peacetime mentality. The TAD provides guidance to the theaters on planning joint exercises to ensure standardization. The theaters plan joint training based on wartime missions. The PLA intends for the regularization of joint training to develop more effective and sophisticated training methods throughout the entire force. Simulation centers and battle labs provide significant support to joint training of commanders and staff.⁵⁰

In April 2018, the TAD held a special meeting of the theaters, services, and branches, People's Armed Police, and other CMC organizations to examine military training in the last two years and adherence to the Interim Regulations for Strengthening Actual Combat Training of 2016 to rectify problems. The leadership of the Training Supervision Bureau discussed accountability and linked the evaluation and punishment of units to create a deterrent effect. Previously, more than 630 problems had been identified, with 90 percent of the issues rectified. The relevant departments of the CMC plan to create a special network for the supervision of military training, with the responsibility of reporting to the CMC's Commission for Discipline Inspection. The meeting also explored the establishment of a double-accountability mechanism focused on eliminating the peacetime mentality and requiring responsibility and rule of law for training.⁵¹

50. Dongbing, Lectures on the science, 33-34, 50-54, 167-77.

51. Dongbing, Lectures on the science, 93-94; Limin et al., On the joint education, 12-13, 23, 140-41; and Management Committee, People's Liberation Army military terminology, 300.

Joint Training Guidance

The PLA believes the development of regulations on joint operations, joint command and coordination, and joint training is required to train adequately toward and implement an integrated joint operations capability. The PLA notes the US military has issued more than 110 joint publications. The PLA has seemingly made some decisions on joint operations issues that have been areas of disagreement between PLA theorists. In 2013, the PLA was in the process of updating joint operations basic guidance documents. This guidance provides the conceptual foundation needed to reform the joint training program structure.⁵² But an NDU book on theater joint command from 2016 states that regulations on command relationships remained vague and lacking in detail and did not support organized and purposeful joint command.⁵³

In January 2018, the CMC issued a new military training outline (军事训练大纲) to build a new military training system of systems. The new training outline provides new regulations and rules for military training in the new era. The training outline supports the development of actual-combat training, joint training, and jointness of the force.⁵⁴ Importantly, the

52. Liang Pengfei and Liu Yiwei, “抓实问题整改 立起监察权威” [Correcting problems, establish supervision authority], *PLA daily*, April 26, 2018, http://jz.chinamil.com.cn/n2014/tp/content_8015788.htm.

53. Dongbing, *Lectures on the science*, 93.

54. Liu Wei, ed., *战区联合作战指挥* [Theater joint operations command] (Beijing: NDU Press, 2016), 107, 341–42.

new training outline is intended to align unit training with the new Triad system.⁵⁵

In February 2019, the TAD announced a regulation on military training supervision, described as the first of its kind. The new training regulation is intended to improve combat readiness, rectify corruption related to military training, and eliminate problems hindering actual-combat training. The regulation prioritizes supervision of military training, standardizes methods for organizing training, and refines criteria for determining training violations.⁵⁶

System-of-Systems and Integrated, Joint Operations Training

PLA training will increasingly focus on developing a system-of-systems and integrated, joint operations capability. The complexities of integrated joint operations will place greater requirements on commanders and staff. Training will integrate forces, systems, and platforms from the tactical to the strategic levels; this will include training of joint strategic groups, joint campaign formations, and joint tactical formations that conduct operations as an operational system of systems. A high level of command and coordination will be required to control dispersed

55. Liang Pengfei and Wu Xu, “我军首批新军事训练大纲正式颁发” [Our army’s first batch of new military training syllabus was officially issued], *PLA daily*, January 26, 2018, http://www.81.cn/jfjmap/content/2018-01/26/content_197929.htm.

56. Liang Pengfei, Liu Yiwei, and Wu Xu, “努力开创新时代军事训练新局面” [Strive to create a new situation in military training in the new era], *PLA daily*, February 1, 2018, http://www.81.cn/jfjmap/content/2018-02/01/content_198469.htm.

forces across a broad, dynamic battlespace.⁵⁷ Figure 7-3 demonstrates the flow of this integration into a joint operations capability.⁵⁸

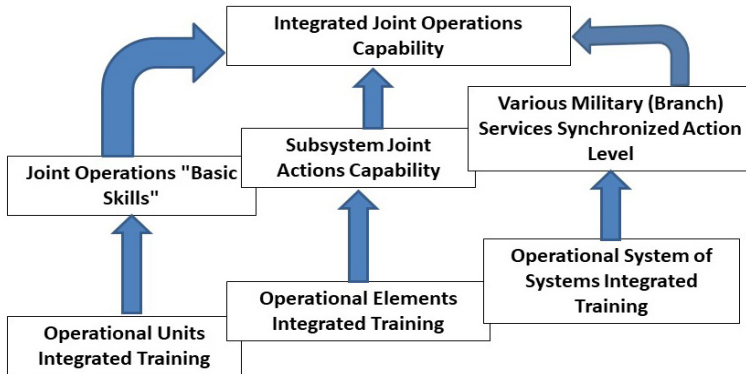


Figure 7-3. Joint training building to an integrated joint operations capability

The PLA has proposed a series of training building blocks required to develop an integrated joint operations capability; these include unit-integrated training leading to basic joint operations skills, operational element integrated training (basic warfighting capabilities such as command and control, reconnaissance, and firepower support) leading to subsystem joint action capabilities, and operational system-of-systems (integrated force grouping) training leading to joint-force synchronized actions. Within the context of these joint training building blocks, the PLA considers the following areas important in

57. Liu Jianwei and Wu Xu, “中央军委主席习近平签署命令” [Chairman of the CMC Xi Jinping signed the order], *PLA daily*, February 12, 2019, http://www.81.cn/jfjbmap/content/2019-02/12/content_227084.htm.

58. Dongbing, Lectures on the science, 97; and Hui, On military training, 234–35, 248, 287.

developing joint capabilities: integration of service-weapon platforms and information networks, real-time coordination, the intelligence process, long-range digital communication, and complex combined arms training.⁵⁹ A requirement not mentioned is the capability to reorganize a modular joint task force as operational requirements change during the course of a joint campaign or action. The extent to which the PLA has progressed in implementing this proposed training plan is unclear, though the organization has embarked on system-of-systems-based training for the force.

Joint Training Areas and Bases

The PLA identifies military training cooperation zones and large training bases as important for joint training and continues to upgrade these training areas. Military training cooperation zones (军事训练协作区) (different PLA publications translate “协作” as “cooperation” or “coordination”) have been important joint training locations for more than a decade, with at least one of these large joint training areas in each theater.⁶⁰

Combined arms tactical training bases are in each theater. Originally established primarily for ground force combined arms training, these training bases evolved into sophisticated exercise venues featuring facilities for the integration of war-gaming and simulation training, exercise monitoring equipment to support unit evaluations, umpires, and multiple integrated laser engagement systems to provide greater realism and specialized training facilities and

59. Dongbing, Lectures on the science, 29–32, 35.

60. Aihua, Joint tactical training, 1.

increasingly support joint training between the army and the air force.⁶¹

Simulation Centers and Battle Labs

The PLA describes warfighting experimentation (作战实验) as using combat simulations to study operational problems in a controllable, measurable, and near-realistic, simulated confrontation environment. The simulations provide analysis and evaluation of combat experiments. Joint simulation training can support the validation of joint operational methods, the provision of confrontation training, and research on employment of new or future weapons and equipment. Joint simulation exercises train joint commanders and staffs and link dispersed field training together in a joint exercise scenario. The dispersed training supports long-range synchronization of operations by the dispersed staffs and units, which approximate the PLA's vision of the future battlefield. Simulation and war gaming provide an efficient and cost-effective means for experimentation and testing of new operational

61. Management Committee, People's Liberation Army military terminology, 319; Zhang Kunping, "Zhurihe Combined Tactics Training Base—PLA's Modern-War-Oriented Drill Ground," China Military Online, January 23, 2013, http://eng.chinamil.com.cn/news-channels/china-military-news/2013-01/23/content_5192997.htm; "From Red and Blue Real Confrontation Historical Changes in Experiencing Combat Effectiveness Standards," China Military Online, February 28, 2014; "Naval Air Force 'Wetstone,'" *PLA daily*, June 25, 2014, 5; and Guo Renjie, ed., "PLA Navy, PLA Air Force to Conduct Free Air-Combat Confrontation Drill," China Military Online, August 19, 2014, http://eng.mod.gov.cn/TopNews/2014-08/19/content_4530414.htm.

concepts.⁶² Simulations and dispersed joint training also conceal the exercise scenario and full scope of the training, creating difficulties in assessing joint training quality and new operational developments.

The 2004 China defense white paper reviewed the use of simulation and network training to improve joint capabilities. Progress had already occurred at that time to improve simulation and network training, with all services and branches having established tactical simulation training systems for command training. An All-Army Academy Operational (Joint) Laboratory Training Simulation System (全军院校作战(联合)实验室训练模拟系统) supports integrated training among military command educational institutions, services, and branches.⁶³ The Academy of Military Science contains a Joint Operations Experiment Center under the War Research Institute. The center researches joint campaign confrontation experimentation and innovation.⁶⁴

The PLA defines “battle labs” (作战实验室) as specialized facilities for conducting combat experimentation and research. Battle labs are an important Information Age simulation means to test new or future operational theories and verify concepts before moving to expensive field testing. But the PLA considers its battle lab system to be incomplete. Some battle labs have been established, but whether they are

62. Aihua, Joint tactical training, 66-67; and Management Committee, People’s Liberation Army military terminology, 669.

63. Information Office of the State Council, “China’s National Defense in 2004.”

64. Shao Longfei, “叶雄兵：我在作战实验中心模拟战争” [Ye Xiongbing: I simulated war in the operational experimentation center], China Military Online, December 7, 2017, http://www.81.cn/jmywyl/2017-12/07/content_7858153.htm.

coordinating work with other research laboratories is unclear.⁶⁵ In 2010 the PLA called for strengthening the construction of battle labs at academic institutions with modern equipment, including virtual reality and artificial intelligence; promoting sharing of resources; and linking with regional joint training bases.⁶⁶

Joint Tactical Training

Joint tactical training has become increasingly important as the PLA intends to push joint operations down to the tactical level. This shift will require the education and training of joint commanders and staff at the tactical level to provide experience with joint combat principles and methods.⁶⁷ The disbanded Jinan Military Region began conducting research field exercises on the organization of joint tactical formations in 2002, and joint training has continued to include these tactical modular task forces. At the same time, the former Nanjing Army Command College

65. Dong Zifeng, 战斗力生成模式转变 [Transformation of generating mode of war fighting capability] (Beijing: Military Science Publishing House, 2012), 37; Management Committee, People's Liberation Army military terminology, 669; "Pre-Practice: Dispersing Informationized Warfare Fog?," *PLA daily*, December 9, 2010; Yan Meng and Ma Qian, ed., "'Battle Lab' Aids Transformation of Combat Power Generation Mode," *PLA daily*, June 29, 2012, <http://en.people.cn/90786/7860104.html>; "Naval Battle Starts on Land," *PLA daily*, February 4, 2010; and "Informationized Warfighting Capability of the PLA Has Multiplied," *Zhongguo tongxin she*, July 22, 2007.

66. Yang Ge, "以体系作战引领人才培养机制创新" [System-of-systems operations leading the innovation of talent training mechanism], *PLA daily*, February 25, 2010, http://www.mod.gov.cn/gflt/2010-02/25/content_4126353_3.htm.

67. Dongbing, Lectures on the science, 49-51.

began the study of joint tactical formations and related tactical issues.⁶⁸

The PLA assesses that most units could not conduct tactical level joint operations due to technological, capability, and training limitations. Integrated joint communications and military education issues continue to hinder joint training efforts.⁶⁹ Although these assessments are likely generally true for the PLA, some units conduct advanced experimentation in tactical joint operations—for example, the 82nd Group Army (formerly the 38th Group Army) and a digitized division in the Central Theater Command.

In addition to communications and joint tactical literacy, the PLA has identified additional issues inhibiting joint tactical training. These issues include the partitions that have existed between the services, leading to a lack of knowledge of other services' procedures, capabilities, and tactics; the required high level of specialized branch training within the services, which limits the amount and quality of joint training; and coordination within and between services, which has proved difficult for commanders and staffs at the tactical level.⁷⁰

Training Evaluation

As with military academic education, improved and accurate assessment and evaluation systems are important to the development of joint capabilities. The PLA intends to continue improving training assessments and eliminate fraud. The PLA assesses

68. Aihua, *Joint tactical training*, 11.

69. Yang Gong Kun, *Joint Operations Research*, ed. Ma Ping (Beijing: NDU Press, 2013), 113–14.

70. Aihua, *Joint tactical training*, 23–26.

the quality of training based on various indicators, including the overall amount of training time for units, confrontation and simulation training, and training content. Live-fire, confrontation, and simulation training quality are given more weight in evaluating training.⁷¹

In 2014, the former General Staff Department's Military Training Department revised unit training evaluations. Changes were made to evaluate unit training throughout the year instead of conducting only an end-of-year evaluation. Another change was to emphasize assessment of command organizations and unit capabilities in the evaluation. The PLA reportedly inspects unit evaluations to ensure the evaluations are fair and accurate.⁷²

The Training Supervision Bureau began monitoring military training beginning in the first half of 2016 to provide high-level management. The bureau monitors important service exercises, theater joint exercises, as well as military educational institutions. A military training inspector team was established in 2017 to support supervision and monitoring of major exercises.⁷³

71. Dongbing, Lectures on the science, 26–28.

72. Liang Pengfei, “总参部署年度军事训练等级评定工作” [General Staff Deployment annual military training level assessment work], *PLA daily*, September 11, 2014, http://jz.chinamil.com.cn/n2014/tp/content_6133670.htm; and Limin et al., On the joint education, 161–63.

73. Limin et al., On the joint education, 152–53; and Liu Qiang, “我军新体制下首届军委军事训练监察员队伍即将上岗” [The first military training supervisor team of the Central Military Commission under the new system of our army is about to take up their post], *Xinhua*, June 24, 2017, http://www.xinhuanet.com/2017-06/24/c_1121202400.htm.

Collection and analysis of training data are important for unit evaluations and the provision of valuable research data to support future training and doctrinal development. The PLA considers conducting exercises approximating actual-combat conditions as vital for supporting research for future training and operational methods, as well as a means to overcome lack of combat experience and peacetime mentality.⁷⁴

GOAL FOR ACHIEVING REFORMS

The PLA has established 2035 for achieving its current military reform strategic goals, including military education and training. Some PLA publications cite a 2020 date for military educational reforms; however, continued problems make it unattainable. The PLA appears to believe it is making progress in education and joint training, although much work remains. The goal of 2035 is reasonable for achieving reforms in joint education and training if key objectives are met. These objectives include controlling corruption that adversely affects military education and training; constructing a high-quality joint faculty and curriculum; improving pay, benefits, and rewards to attract and retain high-quality faculty; establishing effective evaluation methods for students, instructors, and joint training; and integrating the new military revolution based on intelligent technologies into military educational institutions' courses. The lack of progress in military education reform over the past 20 years leaves success in doubt. The CMC needs to overcome the cause of this lack of progress, whether it be a lack of capability or an institutional

74. Dongbing, Lectures on the science, 239; and Aihua, Joint tactical training, 120-21.

impediment. The modernization goals in the reform areas of joint education and training need to be clear, with implementation of a systematic scientific plan to improve the quality in these key areas guided by high-level direction and management.⁷⁵

CONCLUSION

President Xi's current reform effort is focused, in part, on developing integrated, joint, and system-of-systems operational capability to boost the PLA's warfighting capability significantly. Improvements in military education to develop joint talent and joint training are critical for the successful implementation of these twin capabilities. Joint and system-of-systems operations establish complex requirements for joint commanders and staff, including command, coordination, information technology skills, innovation, and joint tactical combat. These requirements are being addressed in the military reforms, although the extent and quality of implementation is unclear.

The PLA has identified a number of problem areas related to joint talent development that could cripple President Xi's reform plans if not adequately resolved. These problems include corruption, lack of qualified joint personnel at all echelons, lack of innovation, outdated courses, poor instructors, insufficient funds and resources, waste of resources, poor discipline and management, bureaucratic inertia, poor command capabilities, a peacetime mentality,

75. Lu Junjie, "推进新时代军事训练创新发展" [Promoting the innovative development of military training in the new era], *PLA daily*, October 30, 2018, http://www.81.cn/jfjmap/content/2018-10/30/content_219407.htm.

lack of combat experience, and inadequate assessment and evaluation systems for individuals and units. The *PLA Daily* articles state that these problems continue to afflict the PLA.

The PLA's Triad military education reform plan and improvements in joint training attempt to redress many of the problems. The Triad system reform plan modernizes and integrates the three elements that have existed in the past: military academy education, unit training practice, and military professional education. Importantly, the PLA intends to integrate military academic institutions and unit training closely to enrich both areas with the exchange of knowledge and experience. Ubiquitous learning with online courses, teaching materials, and resources promotes continuing education throughout the force. Cross-training is a potentially effective means of providing joint experience and knowledge. The PLA intends to push joint learning to joint commanders and staff and the entire PLA.

The NDU and NUDT are playing important roles in developing joint talent and educational reform. Although military educational reforms are planned to be implemented by the end of 2020, both military education and training modernization efforts will be constantly assessed and refined as needed. The 2020 goal appears difficult for the PLA to attain, as systemic problems continue in military education and training. In particular, the development of high-quality joint faculty and courses appears to be the critical component to developing a cohort of joint commanders and staff. Readjusting the current mix and improving the quality of military faculties appear to constitute a long-term project the PLA has not achieved so far.

The two-tier military and training management system consists of the CMC and the services. This system is intended to provide top-level guidance and management of military education and training reforms. Although high-level management is provided, lower echelons appear to have initiative in implementation. For example, the theaters are implementing joint training and evaluation for commanders and staff that leads to a qualification certificate, but the theaters appear to be implementing the program according to different requirements in each theater. This lack of coordination points to a lack of standardization and uniformity, which is a goal of top-level design and could lead to varying levels of joint personnel quality and competence among the theaters.

Improvements in joint training include upgrades to joint training bases and zones, expansion of simulation centers and battle labs, and establishment of joint training evaluations over the course of the training year. The PLA is implementing a three-pronged, building-block training method to implement system-of-systems and integrated, joint operations. The PLA is focusing on joint tactical training because it intends to broaden joint operations to include joint tactical combat by joint tactical task forces. Actual-combat training is intended to address the PLA's lack of combat experience and its peacetime mentality. The PLA believes enhanced joint training will lead to new operational methods, implementation of integrated joint operations, generation of greater warfighting capabilities, development of joint command and coordination procedures, and establishment of modular, joint, task-organized force groupings at the campaign and tactical levels.

President Xi's speech at the National Education Conference in September 2018 addressed the need to build a military educational system that would cultivate joint talents and support military transformation. Although he noted the military educational and training system has improved, he acknowledged that work remains. He recognized the overall training system does not match the mission requirements of the new era or the new organizational form of the military. The traditional mindset remains, and military professional education is still in the initial exploratory stage.⁷⁶ The PLA continues to identify problems and refine the reform plans, albeit slowly.

The number of officers the PLA reported as having graduated from joint courses over the past five years is relatively small. The theaters are establishing joint training and certification of officers, but the quality of this program is unknown. Complex joint exercises provide training and experience for joint commanders and staff. But the military educational reforms have continued for two decades or more, and the PLA continues to report problems while acknowledging some progress in reforms. Although the current reorganization of military academies has met the 2020 reform goal, by the PLA's admission, the cultivation of joint talents will be a long process. Bureaucratic inertia and resistance to change appear to continue to permeate the PLA and retard reform efforts in military education as well as training. Leadership will need to intervene to move these military education and

76. “努力形成更高水平的人才培养体系” [Efforts to form a higher-level talent training system of systems], *PLA daily*, September 14, 2018, http://www.81.cn/jfjmap/content/2018-09/14/content_215845.htm.

training reforms significantly forward after some 20 years of limited results.

The ability of the PLA to conduct an advanced form of system-of-systems and integrated, joint operations will take time, but this does not mean the PLA does not currently represent a lethal opponent. The PLA will need to rely on a hybrid form of joint, coordinated operations during this transition period while integrated joint and system-of-systems operational capabilities are incrementally added. The PLA should prove a dangerous opponent to enemy forces that are equal or inferior to its warfighting capabilities, especially in limited conflicts of short duration. But despite being capable of inflicting casualties on an opponent, the PLA would likely face difficulties in lengthy conflicts against an advanced military capable of advanced joint operations.

Information Gaps

Although PLA publications outline reforms for developing joint operational talent in military academic institutions and improving the quality of joint simulation and field training, many details are not clear, including the degree of quality and effectiveness of the reforms. Information gaps include:

- the extent of the elimination of corruption and fraud hampering the implementation of reforms and inhibiting the development of joint commanders, staff, and unit capabilities;
- whether additional funding and resources are provided for education and training;
- the quality of joint curriculums, course materials, and online learning resources;

- the elimination of poor instructors and the building up and retention of high-quality joint faculty;
- the quality and accuracy of the assessment and evaluation system for teachers, students, and units;
- the issuance of detailed joint regulations on command, coordination, and training;
- the extent of the development of officers who have an in-depth knowledge of informationized systems and warfare;
- the extent of innovation within military educational institutions and development of innovative, joint operational methods;
- the effectiveness of top-level design and management of joint education and training by CMC organizations and theaters, as well as the degree of standardization of programs within the PLA; and
- the effectiveness of plans to create a synergistic effect by integrating military academic institutions and unit training.

Implications for PLA Transformation

Successful implementation and continuing refinement of reform efforts are critical for the development of joint talents. Development of joint talents throughout the PLA at the strategic, campaign, and tactical levels is a key requirement for the implementation of an integrated, joint operations capability. The PLA attempts to address identified operational requirements and problems. But, by the PLA's own admission, serious problems remain, including corruption, bureaucratic inertia, a peacetime

mentality, and a lack of combat experience. This inability to expediently implement required military educational and training reforms will extend the time required to implement an advanced joint operations capability. Leadership has eliminated the bureaucratic obstacles that were delaying the creation of the joint theater commands. Now, leadership needs to break the impediments to high-quality military educational and training reforms for PLA transformation to be successful.

A fully developed, integrated, joint operations capability would make the PLA a dangerous opponent in both regional and global conflict as China's interests extend further abroad. Even if the development period for a significant cohort of joint commanders and staff is lengthy, incremental improvements in multiple areas, including military education and training, will gradually increase the PLA's combat effectiveness as the organization builds toward its goal of becoming an advanced armed force.

The PLA is addressing the information revolution in its cultivation of joint talent, improvements in joint training, and modernization in general. The cultivation of joint talent reforms is primarily focused on catching up with and implementing the information technology revolution in military affairs and building an informationized warfare capability. Now, PLA theorists are discussing the next revolution in military affairs based on intelligent (智能化) technologies, which they believe can have a significant impact on all aspects of the military. These theorists believe the intelligent technological revolution could provide an opportunity to leapfrog in front of the advanced militaries that have already incorporated

information technologies.⁷⁷ Although military educational institutions are beginning to incorporate intelligent-technology issues into the classroom, the focus remains primarily on informationization. The PLA will need to catch up rapidly with the revolution in military affairs based on information technologies or risk falling behind in the new revolution.⁷⁸

77. Xu Shiyong and Wang Jiasheng, “探寻智能化作战制胜机理” [Exploring the winning mechanism of intelligent-based operations], *PLA daily*, January 4, 2018, http://www.81.cn/jfjbmap/content/2018-01/04/content_196178.htm.

78. Cai Yijie, Dong Dengkui, and Yang Fengyuan, “军校课堂里的‘智能脉动’” [“Intelligent pulse” in the military academy classroom], *PLA daily*, January 22, 2019, http://www.81.cn/jfjbmap/content/2019-01/22/content_225884.htm.



PREPARING TO FIGHT AND WIN



8. PLA FOREIGN TRAINING EXCHANGES: MORE THAN MILITARY DIPLOMACY?

John Chen and James Mulvenon

The People's Liberation Army's (PLA's) top leaders recognize that the quality of its personnel is a vital component of its efforts to become a more effective fighting force and its accelerated preparations to fight and win wars. This recognition was made clear in the 19th Party Congress Work Report delivered by President Xi Jinping in November 2017, in which he called for the "strengthening of the military human capital training system" (加强军事人才培养体系建设) as part of the military's renewed mandate to prepare to fight and win wars.¹ President Xi's call to improve the PLA's personnel quickly filtered down through various levels of the PLA: service-level party committees (党委) charged with force construction and personnel development issued specific documents detailing how they plan to implement the Chairman's goals soon after the Work Report.²

Personnel training exchanges with foreign countries are one mechanism by which the PLA is attempting to improve its ability to fight and win the next war. These training exchanges primarily fall into two categories: sending personnel to "study

1. Xi Jinping, "决胜全面建成小康社会 夺取新时代中国特色社会主义伟大胜利" [Comprehensively construct a moderately prosperous society, seize the victory of a new era of socialism with Chinese characteristics] (speech, 19th National Congress of the Communist Party of China, Beijing, October 27, 2017).

2. "聚焦实战、瞄准一流，建设高素质新型飞行人员队伍系列专题报道" [Special report focusing on realism, aiming toward first-rate construction of high-quality new-type aviator contingent], 空军报 [Air Force news], November 7, 2017.

abroad” (留学) and sending personnel to participate in “foreign training exercises” (中外联合军事演习). Study abroad is referenced as a part of the definition for officer training, and foreign training exercises are defined in the “military diplomacy” (军事外交) section of the most recent version of the PLA dictionary.³ Although the PLA regards both of these types of training exchanges as elements of Chinese military diplomacy, it also increasingly views the latter as one of the most important ways in which it can prepare its forces to fight and win. Participation in foreign military competitions, like the International Military Games, is thought to “leave profound impressions that inevitably advance realistic training.”⁴ Other foreign training exercises are credited with raising the realism of maneuvers through “mutual learning and absorption.”⁵

This discussion surveys the impact of foreign training exchanges on the PLA’s accelerated preparations to fight and win the next war, largely focusing on foreign training exercise trends and the personnel that participate in them. Although study abroad opportunities are a unique component

3. 全军军事术语管理委员 [All-Military Military Terminology Management Committee], 中国人民解放军军事语 [People’s Liberation Army military terminology] (Beijing: Academy of Military Sciences Press, 2011), 306, 1065.

4. Liang Pengfei and Wu Yuanjin, “莫斯科赛场：比金牌重要的是收获” [Moscow competition ground: Gains more important than gold medals], 解放军画报 [PLA pictorial], September 19, 2016.

5. “Realistic training brand” is rendered as “实战化训练品牌” in the original Chinese: and see Yang Zhen and Yang Jin, “中巴空军在中国境内举行多兵（机）种联合训练” [Chinese and Pakistani air forces hold multi-branch (aircraft) joint training inside China], 空军报 [Air Force news], September 11, 2017.

of personnel development, the PLA's expanded participation in foreign training exercises and the high-level directives ordering expanded participation in these maneuvers suggest that foreign training exercises will become increasingly prominent parts of PLA personnel training. In the short term, foreign training exercises offer PLA personnel unprecedented opportunities to hone their skills in high-stress environments, while potentially shielding them from personnel disruptions caused by the latest organizational reforms. In the long term, the gathering of exercise data and benchmarking utility of these exercises could eventually have profound impacts on the command capabilities of PLA personnel and its overall operational capabilities; although, there is little open-source evidence to suggest the PLA is effectively collecting or using exercise data at a macroscopic level to improve its personnel.

The remainder of this discussion proceeds in three parts. The first section describes the context and evolution of PLA participation in foreign training exercises by defining key terms, describing PLA views on foreign training exercises, and documenting larger trends in the PLA's participation in foreign training exercises. The second section examines PLA participation in foreign training exercises from a personnel standpoint, primarily focusing on pre-exercise personnel selection, command and control during foreign training exercises, and post-exercise review and dissemination of knowledge obtained. The final section assesses the impact of foreign training exercises on the PLA's preparations to fight and win and describes the future implications of increased PLA participation in foreign training exercises.

CONTEXT AND EVOLUTION OF PLA FOREIGN TRAINING ACTIVITIES

The PLA uses a variety of terms to describe military training (军事训练), which encompasses “education in military theory and specialty knowledge, operational skills instruction, and military maneuvers” and includes training activities like drills (演练) and exercises (演习).⁶ Drills are military maneuvers carried out at the *fendui* (分队) level according to set rules and led by a smaller number of directing and coordinating personnel. Exercises are defined as operational command and maneuver drills carried out under the direction of an exercise director department (导演部) (EDD), which is typically composed of the exercise director (导演), coordinators, referees, and technical support personnel.⁷ Exercises are considered a “higher-level form of military training than a drill” and the “highest form of military training.”⁸

Official PLA definitions of foreign training drills and exercises are defined in anodyne terms that shed little analytical light on the types or characteristics of foreign training activities. But official military media and top PLA leaders frequently group foreign training activities into three categories: joint training

6. Management Committee, People’s Liberation Army military terminology, 299, 311, 313.

7. Management Committee, People’s Liberation Army military terminology, 313-14.

8. Lu Hui, “善学而立锻王牌” [Perfecting learning and independently forging a trump card], 空军报 [Air Force news], August 15, 2017; and Ning Yingqiu, “信息化条件下部队演习评估组织与实施” [Organization and execution of unit assessment under informatized conditions], 战士报 [Warrior news], October 22, 2012.

(联训), joint exercises (联演), and joint competitions (联赛). Although PLA academics consider foreign training exercises (translation shortened as “联演”) to be higher-level and more complex undertakings than foreign training (联训), no publicly available sources authoritatively establish the PLA’s hierarchical view of foreign training competitions. For the sake of clarity, this discussion uses “foreign training activities” to refer to all drills, training, exercises, and competitions that involve foreign countries.⁹ Also regarding this discussion, although US exercises with foreign partners are referred to as combined maneuvers to distinguish them from joint exercises that involve more than one military service, the PLA uses “lianhe” (联合) to refer to both joint maneuvers with more than one service and maneuvers with foreign countries—even if the latter involves only one PLA service. The PLA uses “中外联合训练” or “中外联合演习” to refer to foreign training drills and exercises as a result.

All of these various forms of military training are governed by the 军事训练与考核大纲 (Outline of military training and evaluation [OMTE]), a high-level training guidance that sits atop a bevy of other formal training documents. Formerly issued by the General Staff Department, the OMTE lays out exercise topics, conditions, content, standards, evaluation, times, requirements, and the types of personnel and units that participate in training exercises.¹⁰ Units and services each have their own OMTEs that lay down specific exercise and training requirements for their

9. Chu Yongzheng et al., 军事外交学 [Science of military] (Beijing: National Defense University Press, 2015), 195.

10. Zhan Yu, 部队演习学 [Science of unit exercises], ed. Yang Baoyou (Beijing: Academy of Military Sciences Press, 2009), 406.

respective organizations, but all derive their basic content from the General Staff Department OMTE. The General Staff Department issued OMTEs in 2002, 2008, and 2018. Even though the exact contents of the latest OMTE are not publicly available, each one has stressed different points of emphasis for the PLA's training regimen. For instance, reserve unit training is governed by the 预备役军事训练与考核大纲 (Reserve Unit Outline of Military Training and Evaluation), and each PLA service (including the former Second Artillery Corps) appeared to have its own OMTEs.¹¹

The latest iteration of the OMTE formalizes a broader effort to learn and absorb successful training methods from foreign militaries. This effort will rely

11. Sun Jiwei and Qian Xiaohu, “预备役部队：加速转型保障打赢” [Reserve units: Accelerating transformation to support victory], 军报记者 [Military correspondent], June 15, 2017, http://jz.chinamil.com.cn/n2014/tp/content_7639886.htm (site discontinued); Yin Xinye, Liu Chongchen, and Xu Xianchuan, “有氧 + 无氧！1个小时9个课目成为体能训练“新常态” [Aerobic and anaerobic: Nine subjects in one hour becomes new normal for physical training], 军报记者 [Military correspondent], March 16, 2018, http://nb.81.cn/content/2018-03/16/content_7974685.htm (site discontinued); Zhang Hongwei, “空军将心理训练内容纳入飞行训练大纲” [Air Force adds psychological training to aviation training outline], 解放军报 [PLA daily], April 14, 2015, http://www.81.cn/jmywyl/2015-04/14/content_6441205.htm; Chen Taofu, Zhang Rong, and Tao Shelan, “第二炮兵某导弹旅发射一营：砺剑精武的导弹奇兵” [First battalion of a Second Artillery missile brigade: Sharp and precise ambush troops], 中国新闻网 [China news service], December 23, 2010, <http://www.fxj.hunan.gov.cn/Article/ywzx/201012/1268.html> (site discontinued); Ding Xiaofeng, Zhu Jinrong, and Wu Dengfeng, “海军航空大学培养新型军事人才：起飞，向着未来战场” [Naval Aviation College trains new aviation talent: Taking off toward future battlegrounds], *Xinhua*, December 18, 2017, http://www.81.cn/hj/2017-12/18/content_7871595.htm; and Dennis Blasko, *The Chinese Army Today* (New York: Routledge, 2012), 176.

in large part upon expanded PLA participation in foreign training activities. Official reports indicate the 2018 OMTE calls for an “expansion in foreign training content,” and Central Military Commission (CMC) Military Training Administration Department (军委训练管理部) Director Li Huohui (黎火辉) noted in February 2018 that the new OMTE stresses “absorbing successful methods from foreign militaries.”¹² Huohui also enumerated foreign training, exercises, and competitions as important sources of advanced theory and experiences the PLA ought to absorb into its training.¹³ Much of this high-level validation is reflected in scholarly thinking from high-level PLA academics: some PLA theoreticians have explicitly noted that foreign training activities are a way to “test frontline military theory, learn from other countries’ experiences, and raise the warfighting capability of [Chinese] units.”¹⁴ Also, PLA scholars argue that, among other factors, the intensity of foreign training exchanges is a critical component of accelerating the cultivation of joint commanders.¹⁵

12. Bi Wenxiu and Li Pengfei, “新军事训练大纲都有暗内容?” [What content is in the new outline of military training?], 解放军报 [PLA daily], June 15, 2017; and Liang Pengfei et al., “军委训练管理部领导就颁发新军事训练大纲有关情况答记者问” [Head of the CMC Military Training Management Department answers journalist questions regarding promulgation of new outline of military training], 解放军报 [PLA daily], February 1, 2018, http://www.mod.gov.cn/topnews/2018-02/01/content_4803908.htm.

13. Pengfei et al., “Head of the CMC Military Training Management Department.”

14. Yongzheng et al., *Science of military diplomacy*, 196–97.

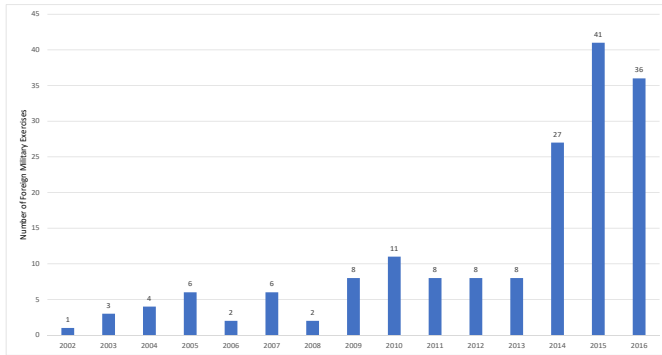
15. Liu Wei, ed., 战区联合作战指挥 [Theater Joint Operations Command] (Beijing: National Defense University Press, 2016), 312.

Although the 2018 OMTE is the first high-level expression of the training value the PLA derived from foreign training activities, its arrival was preceded by years of increased PLA participation in foreign training activities of all kinds. The PLA's participation in foreign training activities has ballooned since the first foreign training activity in 2002 (see table 8-1).¹⁶ Many of these exercises were small-scale maneuvers focusing on anti-terrorism, disaster relief, and special operations topics.¹⁷ In hindsight, the steady expansion in frequency and types of exercises the PLA participated in over the years suggests a measured effort consistent with the PLA's *modus operandi*.

16. Kenneth Allen et al., *Chinese Military Diplomacy, 2003–2016: Trends and Implications*, China Strategic Perspectives no. 11 (Washington, DC: National Defense University Press, July 17, 2017), 29.

17. Dennis J. Blasko, "People's Liberation Army and People's Armed Police Ground Exercises with Foreign Forces, 2002–2009," in Roy Kamphausen, David Lai, and Andrew Scobell, eds., *The PLA At Home and Abroad: Assessing the Operational Capabilities of China's Military* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2010), 377–78.

Table 8-1. PLA participation in foreign military exercises



Aside from their training value, PLA academicians also view foreign training activities as strategically valuable tools of military diplomacy. Foreign training can be used to “demonstrate joint military power and intimidate opponents” as a part of “shaping effective strategic deterrence” (展示联合军事实力, 震慑对手).¹⁸ Foreign training activities can also be used to strengthen international military exchange and mutual relations.¹⁹ At the strategic level, PLA theoreticians believe military diplomatic activities (including foreign training exercises and drills) can be used to prevent, reduce, create, respond to, or intensify crisis situations.²⁰

The treatment of foreign training activities as a military diplomatic matter extends beyond academic literature into logistics and planning. As they involve foreign contact, foreign training activities also require a significant degree of coordination with foreign

18. Yongzheng et al., *Science of military diplomacy*, 195.

19. Yongzheng et al., *Science of military diplomacy*, 196.

20. Yongzheng et al., *Science of military diplomacy*, 132–41.

counterparts as well as within the highest levels of the PLA itself. From an external standpoint, the PLA's participation in foreign training activities is subject to the willingness of other nations to participate. From an internal perspective, PLA participation in foreign training activities falls to PLA organizations charged with arranging training and foreign affairs. In the past, the logistics of arranging foreign training activities likely fell to two nominally co-equal corps leader-grade organizations: the General Staff Department Military Training Department (总参谋部军事训练部), which likely determined the internal details of PLA participation in foreign training, and the Ministry of National Defense Foreign Affairs Office (国防部外事办公室), which coordinated efforts with foreign participants. This dual chain of responsibility reflected the PLA's view of foreign training activities as a matter of both military diplomacy and military training.

Although foreign training activities have been characterized as military diplomatic efforts in the past, the PLA increasingly regards foreign training activities as realistic war exercises. Articles in PLA media outlets routinely describe foreign training activities as ways to increase the realism of PLA training.²¹ This shift in emphasis is reflected at least partially in organizational changes made during the 2015 PLA reforms, which recast the General Staff Department Military Training Department as the CMC Training Administration Department and elevated the new entity to a theater command deputy leader-grade organization, while keeping the Ministry of National Defense Foreign Affairs Office's successor organization, the CMC

21. Dong Bin and Su Xiao, “实战空军 赛场磨砺战场打赢” [Realistic combat Air Force: Competition grounds mill victory on the battlefield], 空军报 [Air Force news], August 11, 2017.

Office of International Military Cooperation (军委国际军事合作办公室), as a corps leader-grade entity.²² This change suggests the PLA's training requirements may play a larger role in determining the details of future foreign training activities.

Other changes in the PLA may explain shifts in its participation in foreign training activities. As the dust settles from the 2015 PLA organizational reforms, the PLA will likely continue to emphasize small-unit participation in foreign training activities, especially military competitions that focus more on individual and small-unit skills and less on more complex and demanding larger unit maneuvers. Author and PLA expert Dennis Blasko contends that participation in these military competitions may protect PLA servicemembers from disruptions caused by ongoing organizational reform.

PLA PERSONNEL IN FOREIGN TRAINING EXERCISES

Despite the steadily increasing emphasis on foreign training activities described above, the PLA does not publish detailed information on the role of foreign training activities in personnel training and development. As a result, critical details on the role of foreign training activities in career progression and training cycles are not readily available. Nevertheless, PLA writings on military diplomacy and military exercises suggest the PLA's selection process for personnel bound for foreign training exercises,

22. Defense Intelligence Agency (DIA), *Directory of PRC Military Personalities, March 2015* (Washington, DC: DIA, 2015), 11, 28; and DIA, *Directory of PRC Military Personalities, March 2016* (Washington, DC: DIA, 2016), 14, 16.

command and control during these exercises, and post-exercise assessment are heavily regulated and controlled by the political work elements of the PLA. The party committees and party branches (党支部) of PLA units are the ultimate loci of authority for all phases of a foreign training exercise that pertain to personnel, including personnel selection, instruction, command and control, and after-action assessments and dissemination of knowledge.

Pre-Exercise Personnel Selection and Instruction

The PLA personnel who aspire to participate in foreign training exercises are subject to multiple selection and evaluations processes that appear to be governed by broader overarching criteria but are ultimately subject to approval by their respective units. Although details on the selection and evaluation process are difficult to obtain from publicly available sources, PLA academic texts and handbooks reveal general themes for personnel selection, and PLA newspapers and official media detail some of the practices used to select personnel for participation in foreign training exercises.

Personnel Selection

The PLA selects its most well-rounded and politically loyal personnel for foreign duty, including foreign training exercises. One PLA academic text lists five categories of ideal attributes for personnel carrying out military diplomacy, including foreign training exercises. Political attributes include a high awareness of policy, political positions consistent with the party line, and values of dialectical materialism; military attributes call for a strong background in

military theory, mastery of informatized warfare, and joint warfare consciousness; administrative qualities include knowledge of foreign languages and etiquette as well as strong organizational and planning skills; and cultural and physical qualities emphasize a well-rounded education and physical fitness.²³

Sample PLA forms suggest that personnel applying for any sort of foreign duty must obtain approval from the party committee or political department of a corps-level military organization or higher.²⁴ The 因公出国（境）人员审查批件 (Foreign duty personnel examination form) issued by the Cadre Department of the former General Political Department (总政治部干部部) asks for details on the applicant's political reliability and personal and work history, as well as those of their family and romantic partners, including:

- conditions of accession to the military;
- date of accession to Communist Party of China;
- foreign language proficiency;
- economic class of family pre- and post-1949;
- romantic partner's name, age, education level, birthplace, political leanings, current work and status, and any domestic problems or issues;
- pre- and post-1949 résumé and whereabouts;
- party work history, including any service in any level of party committee;
- any rewards or punishments outside or inside the party, pre- or post-1949; and
- detailed political history of the applicant and the applicant's family including any arrests,

23. Yongzheng et al., *Science of military diplomacy*, 264–73.

24. Yang Qi, *军事干部工作手册* [Military cadre work handbook], ed. Su Shubo, Lin Cheng, and Yu Zhiyong (Beijing: National Defense University Press, 2011), 110, 396.

withdrawal from the party, or hidden political affiliations.²⁵

In practice, the operational conditions for personnel selection appear to be up to the various PLA services and units that contribute personnel to foreign training activities. For instance, one regiment at a PLA Air Force (PLAAF) flight training base supplied four pilots for the Aviadarts 2017 military competition through an unspecified selection process (考核选拔). Some of these pilots had comparatively little experience, but the regiment commander overruled their limited experience and relied upon evaluation of their test scores instead, sending them to the competition.²⁶ The PLAAF pilots selected to participate in that military competition had to be under 35 years of age, the better to develop future PLAAF aviators.²⁷ Northern Theater Command (TC) Navy personnel who later received pre-exercise foreign affairs instruction had undergone multiple levels of selection, including written tests, interviews, and recommendations from their units. The personnel were also evaluated on their overall qualities and foreign language skills.²⁸

Some of the personnel sent to participate in foreign training activities have had extensive domestic training experience, although the exact amount of domestic training experience required for participation in foreign training is unknown. Exercise directors frequently

25. Yang Qi, *Military cadre work handbook*, 390-96.

26. Dong and Su, "Realistic Combat Air Force."

27. Dong and Su, "Realistic Combat Air Force."

28. Zhang Xinguang and Lai Yonglei, "北部战区海军组织外事骨干培训" [Northern Theater Command Navy organizes external affairs backbone training], *人民海军* [People's Navy], April 2, 2018.

have extensive domestic exercise experience; for instance, the director of the PLA contingent for Peace Mission 2018 (和平使命-2018), Army Senior Colonel Ma Qixian (马启贤), was previously head of the Operational Training Division (作训处长) for the 42nd Group Army and had participated in domestic cross-regional exercise Mission Action 2013B (使命行动-2013B) as a division leader.²⁹

Past experience in foreign training activities is also a factor in the selection of PLA personnel for foreign training activities, although some PLA services are attempting to reduce the number of repeat participants in these maneuvers. For instance, Air Force brigade chief of staff and special aviator Wang Xiaojun (王小军) participated in both the 2016 Aviadarts competition in Russia and the 2017 China-Pakistan exercises, and company commander Mao Xiaolong (毛小龙) of the PLAAF airborne forces participated in Peace Mission 2014 and underwent a selection process in 2016 to lead PLAAF forces in an unspecified

29. Luo Shunyu and Pan Kai, “和平使命-2018’ 联合反恐实兵实弹演习举行” [Peace Mission-2018 joint anti-terrorism live fire exercise begins], 国防部网 [Ministry of Defense online], August 30, 2018, http://www.mod.gov.cn/power/2018-08/30/content_4823603.htm; Yue Huairang, “马启贤任西部战区联参部参谋长助理，曾率部27小时千里奔袭” [Ma Qixian becomes Western Theater Command Joint Staff Department assistant to the chief of staff], *Paper*, August 25, 2018, https://www.thepaper.cn/newsDetail_forward_2380374; and Li Huamin and Shi Binxin, “战场随时会变脸—‘使命行动-2013B’ 跨区机动战役演习见闻” [The battlefield can always change—Sights and sounds from Mission Action 2013B Cross-Regional Movement Exercise], *Xinhua*, October 18, 2013, http://www.gov.cn/jrzg/2013-10/17/content_2509499.htm.

foreign training exercise.³⁰ The 2018 International Military Games (国际军事比赛-2018), however, saw a number of PLA firsts: the PLA ground forces ruled for the first time that no single unit may participate in consecutive competitions in a row, and the proportion of new personnel participating must be no less than 60 percent. The PLAAF airborne forces participating in the games were selected according to a three-to-one ratio of new soldiers to experienced ones.³¹

Participation in foreign training exercises and drills is no longer necessarily restricted to active-duty, operational forces. Peace Mission 2014 marked the first time a reserve unit participated in a foreign training exercise.³² The unit was a *fendui* from the All-Military Reserve Electromagnetic Spectrum Management Center (全军预备役电磁频谱管理中心). The 2018 International Military Games marked the first time PLA military educational institutions sent independent detachments to a foreign training exercise. Personnel from the Army Armored Forces College Noncommissioned Officer School (陆军装甲兵学院士官学校) participated in a maintenance competition,

30. Wang Xiaofei, ed., “苦练精飞不负重托” [Hard training and energetic flying deserve great trust], 空军报 [Air Force news], November 7, 2017; and Fang Chao et al., “带头吹向“冲锋号” [The lead charges toward the bugle call], 空军报 [Air Force news], May 4, 2018.

31. Liu Jimei and Li Yun, “‘国际军事比赛-2018’中的5个首次” [Five “firsts” in the 2018 International Military Games], *Xinhua*, July 29, 2018, http://www.mod.gov.cn/diplomacy/2018-07/29/content_4821072.htm.

32. Liu Wanping, “军地人才携手提升军事创新能力” [Military and local human capital join hands to raise military innovation capability], 解放军报 [PLA daily], September 5, 2014, <http://military.people.com.cn/n/2014/0905/c172467-25607178.html>.

and a detachment from the Army Engineering College Ordnance Noncommissioned Officer School (陆军工程大学军械士官学校) participated in an ordnance competition. All personnel participating in the games were cadets headed for duty at various Army units, and their trainers were instructors from their respective schools.³³

Pre-Exercise Instruction

Once selected for participation in a foreign training exercise, PLA personnel undergo additional preparation well before an actual exercise begins. This instruction focuses on a variety of service- and situation-specific topics and generally includes briefings from intelligence experts, situational simulations, additional foreign language training, and reviews of PLA regulations and practices. For instance, in March 2018, the Northern TC Navy organized a five-day external affairs training session for 50 operational unit staff members from Qingdao and Lushun. The training focused on military external work (军队涉外工作) and covered international relations, Asia-Pacific maritime security trends, rules, and regulations for external-facing military movements, media communications and responses, escort command and command of noncombatant evacuation operations for overseas Chinese, military external affairs protocol and etiquette, verbal military commands, cultural differences between Chinese and foreign militaries, and selected practical translations. The students also simulated deck receptions, reporter receptions,

33. Liu and Li, "Five 'Firsts.'"

warship tours, and driving away unidentified foreign surveillance and reconnaissance aircraft.³⁴

Although some of the topics addressed by additional pre-exercise instruction are common across the PLA, other topics vary by theater command and service. In October 2016, the General Office of the Southern TC Army Staff Department (南部战区陆军参谋部办公室) reported that 30 students had been listed in an external military affairs human resources database (涉外军事人才库) after successfully passing an external military affairs course. The course had been set up specifically to address problems encountered by Southern TC Army personnel engaged in foreign training exercises with foreign military personnel and contained material ranging from foreign military small-unit tactics and theory to the overall international security situation. Course students used foreign languages to communicate with simulated foreign troops during a simulated foreign drill.³⁵

Some PLA personnel selected for foreign training exercises spend extra time preparing for their duties by working on their foreign language skills, occasionally with the support of PLA instructors. Before participating in Aviadarts 2017, one PLAAF officer spent extra time studying English with an emphasis on applicable phrases and terms to better understand foreign flight training methods.³⁶ The PLA tacitly recognizes that English is the lingua franca for foreign training exercises: PLAAF flight instructors

34. Zhang and Lai, "Northern Theater Command Navy."

35. Xu Yang and Peng Tian, "外事通 走向国际联训一线" [Foreign affairs experts march toward international training frontlines], 人民陆军 [People's Army], November 19, 2016.

36. Lu, "Perfecting learning."

have explicitly continued to render technical terms in English without Chinese abbreviations partially to better prepare PLAAF pilots for future participation in foreign training exercises.³⁷

Some pre-exercise preparation takes place in the form of on-the-job instruction that continues en route to the exercise location. In January 2017, the temporary party branch (临时党支部) of the command post (指挥所) of the 24th PLA Navy escort task force led an education session on external affairs discipline. The session included both combined and small-group instruction on an external affairs document called External Affairs Reference Materials (外事参考资料), and personnel were briefed on the Ten Forbidden Actions (十不准) for secrecy protection.³⁸

Regardless of service- or unit-specific preparation, all PLA personnel participating in foreign training exercises are subject to political work regulations that govern their behavior. For instance, regulation 61 of the PLA Internal Affairs Regulations (中国人民解放军内务条令) requires all PLA personnel on foreign duty must respect international etiquette and regulations.³⁹ Other regulations pertain to operational security: PLA participants in foreign training exercises are forbidden

37. Long Bin and Chen Zhijin, “术语之变，折射训练模式之新” [Changes in technical language reflect new training methods], 空军报 [Air Force news], June 20, 2018.

38. Guo Can and Zhang Tengfei, “开展 ‘守纪律，树形象，保安全’ 教育” [Developing “adhere to discipline, establish forms, protect safety” education], 人民海军 [People’s Navy], January 9, 2017.

39. Wang Jun, ed., “中国人民解放军内务条令（试行）” [PLA Internal Affairs Regulations (Provisional)], 解放军报 [PLA daily], April 17, 2018, http://www.81.cn/jmywyl/2018-04/17/content_8006090.htm.

from independently visiting foreign military bivouacs or installations, inviting foreign personnel for unauthorized visits to PLA installations, holding celebratory events, or otherwise privately establishing relations with foreign military personnel.⁴⁰

Command and Control of Foreign Training Exercises

Command and control during foreign exercises is executed by EDDs charged with setting exercise parameters, executing the exercise, and evaluating end results.⁴¹ These ad hoc command organizations are usually led by staff officers responsible for training at their regular units and manned by augmentees from military educational institutions and logistics and support personnel.⁴² The EDD resembles a *deus ex machina*, able to determine the success or failure of participating units thanks to its control over exercise parameters and its role as the command element (指挥部), regulation and control platform, and exercise leader.⁴³

As an ad hoc PLA leadership structure, the EDD is required to establish a temporary party committee (临时党委) or branch (党支部) to maintain party

40. 总政治部干部部 [Cadre Department of The General Political Department], ed., 中国人民解放军军官手册 [PLA officers' handbook] (Beijing: Academy of Military Sciences Press, 2012), 60.

41. Zhan Yu, 部队演习学 [Science of unit exercises], ed. Yang Baoyou (Beijing: Academy of Military Sciences Press, 2009), 112-13, 184-85.

42. Zhan, Science of unit exercises, 191-94.

43. Zhan, Science of unit exercises, 112-14.

control over an exercise.⁴⁴ Party committees refer to party organizations in regiment-grade units and above, and party branches refer to party organizations in company-grade units. Much like any other PLA organization, an EDD's party organization is comprised of key command personnel. The party secretary and deputy party secretary are appointed by a superordinate party organization, and the committee itself is comprised of the EDD's leadership (likely the exercise director and deputy directors) and subordinates one grade below (likely the personnel responsible for each of the EDD's various functional groups). An EDD party committee may establish subordinate party branches with approval from above, and typically does not establish a standing committee except under special circumstances.⁴⁵

The most important elements of exercise decision making are undertaken by EDD personnel in their collective capacity as the EDD's party committee. All critical decisions must abide by the party concept of democratic centralism (民主集中制), which emphasizes collective leadership through collective deliberation (集体讨论). In turn, collective deliberation requires that the "collective knowledge, scientific policy-making, and expeditious resolve of the Party committee be given full play."⁴⁶ An EDD commander may handle a matter independently, as is the case with commanders in participating units, but must report their action to the party committee after the fact.⁴⁷

44. Management Committee, People's Liberation Army military terminology, 453, 458.

45. Zhan, Science of unit exercises, 389-90.

46. Zhan, Science of unit exercises, 390.

47. Zhan, Science of unit exercises, 252, 390.

From a personnel development standpoint, the EDD is a proving ground for the PLA's most capable training instructors, who likely use assignments to these organizations to demonstrate their organizational mettle and command potential. Orchestrating and coordinating multiple operational units during military exercises represents the pinnacle of complex military operations for PLA commanders, the vast majority of whom have not seen actual combat. This observation is especially true for EDDs in foreign training exercises, which face the additional stress of international scrutiny and increasingly bear responsibility for both improving PLA training methods by learning from foreign counterparts and advancing national interests through military diplomacy.

Many of the roles, responsibilities, and processes described above apply to PLA EDD formations in foreign training exercises. For instance, the Vostok-2018 (东方-2018) exercises held in September 2018 featured a joint exercise director department (联合导演部) picked from personnel from the CMC Joint Staff Department and the Russian Armed Forces General Staff Department upon their arrival at the exercise location. These personnel were responsible for "organization, command, and support work" for participating troops, providing "real-time command adjustments" for participating command organs,

completing operational planning, and “coordinating and commanding unit movements.”⁴⁸

In addition to their regular prescribed duties, EDDs in foreign training exercises are also apparently responsible for directing and setting up ad hoc command elements for subordinate participating units. For instance, Vostok-2018 featured a four-tier command structure: a CMC-level EDD (军委导演部), a theater command joint campaign command department (联合战役指挥部), a group army-level campaign command post (集团军战役指挥所), and command elements at the *budui* level. The theater command-level command department was set up on the order of the Sino-Russian joint EDD.⁴⁹ Similar command structures were established for Joint Sea-2017 (联合海上-2017), which featured a Sino-Russian EDD, along with a joint command department (联合指挥部) and a command post for the surface tactics group (海上战术群指挥所).⁵⁰

Personnel reductions from the 2015 organizational reforms appear to have had a direct impact on the number of personnel the PLA sends to foreign

48. Fan Yongqiang, “‘东方-2018’ 战略演习展开联合战役指挥演练” [“Vostok-2018” strategic exercise develops joint campaign command training], 解放军报 [PLA daily], September 13, 2018, <http://military.people.com.cn/n1/2018/0913/c1011-30290982.html>; and Cai Pengcheng, “‘东方-2018’ 战略演习联合战役实兵演练和沙场检阅举行” [“Vostok-2018” strategic exercise joint campaign troop exercise and sand table review begin], *Xinhua*, September 14, 2018, http://www.xinhuanet.com/world/2018-09/13/c_1123424599.htm.

49. Fan Yongqiang, “‘Vostok-2018’ strategic exercise.”

50. Ding Yubao, “‘海上联合-2017’ 下达演习作战任务并展开图上推演” [“Joint Sea-2017” issues exercise operational duties and opens map exercise], 人民海军 [People’s Navy], September 20, 2017.

training exchanges. One report indicated that in 2015, the PLAAF sent more than 100 personnel from the military region air force, division, regiment, and the air station (场站) levels to form the command structure (指挥机构) for the Shaheen V China-Pakistan drill. For the 2017 iteration (Shaheen VI), however, the participating air force base and subordinate air force brigade sent just under 50 personnel from the division level (处) of the base and brigade command organs to form a joint exercise office (联训办公室).⁵¹

The PLA officers selected to serve as exercise directors for foreign training exercises are frequently of varying grade and billet, which hints at a hierarchy for these maneuvers (see table 8-2). Exercise directors are designated by the exercise's organizing authority: exercises directly organized by the former General Departments are directed by either the head of the General Department or a designated staffer; exercises organized by the General Departments and former military regions or services are directed by military region or service heads of training or department heads; and exercises organized by corps-level units are directed by corps-level heads of training or department heads.⁵² Although these assignments may be determined by exercise size or complexity, some of these exercise directors may also be assigned for reasons of strategic significance, assuming this assignment system for exercise directors is still valid after the 2015 PLA reforms.

51. Yang Songsong et al., “联训为石，磨利胜战之刃” [Joint drill as grindstone, sharpening the sword of victory], 空军报 [Air Force news], October 12, 2017.

52. Zhan, Science of unit exercises, 189-90.

Table 8-2. Exercise directors for selected recent foreign training exercises

Name	Grade	Rank	Billet	Service or Branch	Exercise	Probable Organizing Authority
Ma Qixian (马启贤)[1]	Corps DLDR (Probable)	SCOL	Assistant to Chief of Staff, Western TC JSD	Army	Peace Mission 2018	Western TC
Tian Zhong (田中)[2]	TC DLDR	VADM	Deputy Commander, PLAN	Navy	Joint Sea 2017	PLAN
Shao Yuanming (邵元明)[3]	TC LDR	LGEN	Deputy Chief of Staff, CMC JSD	Former Second Artillery	Vostok 2018	CMC JSD

The PLA EDDs increasingly coordinate exercise plans in detail with foreign counterparts, especially Pakistan and Russia, although the degree of combined interaction varies. For example, PLAAF personnel at Shaheen VI consulted with their Pakistani counterparts in planning and selection of training subjects (课目).⁵³ All three ad hoc command elements set up for Joint Sea-2017 were reportedly staffed with both Chinese and Russian personnel, with substantive duty exchanges at each command element. The Sino-Russian EDD organized operational duty shift changes (作战交班) and established an operational duty system (作战值班制度) at the joint command department to command forces, process information on real-time exercise progress and air-sea intelligence, and help Chinese and Russian officers plan operational decisions.⁵⁴

53. Yang Songsong et al., "Joint drill as grindstone."

54. Ding, "'Joint Sea-2017.'"

Learning the Right Lessons: Assessment, Summary, and Dissemination of Knowledge

Once a foreign training exercise concludes, participating personnel are responsible for conducting and participating in a post-exercise review process. This review process is typically grouped into assessment (评估) and summary (总结) phases, and ultimately leads to the dissemination of knowledge both inside and outside participating units. Post-exercise assessment involves the collection and organization of exercise performance data and is typically carried out by the EDD and its supporting information collection groups.⁵⁵ Assessment data is to be collected at the end of every drill, although the data may be collected at the end of the exercise if information collection personnel are widely dispersed during the maneuvers.⁵⁶ For domestic exercises, assessment data is sorted based on drill problem, operational capability, and unit maneuver and entered into a unit exercise assessment system (部队演习评估系统) that calculates scores for participating units.⁵⁷

Data-driven assessment is meant to inform a post-exercise summary and appraisal (总结讲评). After an exercise is complete, the EDD party committee and the party committees of the various participating units hold party committee meetings (党委会) at their respective command posts to arrange summary and appraisal sessions. The exercise director and EDD personnel collect information and materials as the unit

55. Ning, "Organization and execution of unit assessment"; and Zhan, *Science of unit exercises*, 273.

56. Zhan, *Science of unit exercises*, 285.

57. Zhan Yu, *Science of unit exercises*, 287.

leaves the exercise area and hold appraisal sessions within the EDD, while commanders of participating units hold their own summary and appraisal sessions. For domestic exercises, the results of these sessions are ultimately consolidated into a report that is transmitted to the relevant superordinate units within 15 days of the summary and appraisal sessions. These reports contain a brief account of the drill or exercise, the overall progression of the training activity, problems that emerged and the causes thereof, and attachments of relevant assessment data.⁵⁸

Generally speaking, there is almost no detailed mention of the assessment phase in recent media, which raises questions about what or if assessment is carried out during and immediately after foreign training exercises. For instance, reports from the 2017 Shaheen VI exercise remarked on an after-action assessment phase but did not make clear whether or not the assessment relied upon data gathered during maneuvers. Another report noted the realistic war requirements used for the Aviadarts 2017 military competition would be incorporated into assessment standards in the future, but did not specify if any data-driven assessment took place to motivate such future action.⁵⁹

Summaries of foreign exercise performance, however, are comparatively commonplace. Party committees of units participating in foreign training exercises take the lead in summarizing lessons learned from foreign militaries. For instance, in August 2017,

58. Zhan Yu, *Science of unit exercises*, 393–94.

59. Chen Quanmin, ed., *信息化条件下部队训练中政治工作* [Political work during unit training under informatized conditions] (Beijing: Academy of Military Sciences Press, 2010), 262–63, 267.

the party committee of a combined arms brigade from the 83rd Group Army began summarizing training theory and practices immediately after the brigade returned to base from its participation in the 2017 International Military Games, with the intent of learning from foreign militaries to help advance PLA training and equipment modernization. The resulting after-action summary identified 38 concrete problems encountered during the exercise.⁶⁰

In some instances, PLA exercise participants hold post-exercise assessments and summaries with foreign partners. For Joint-Sea 2017, Russian and Chinese personnel held an exercise summary and appraisal on the final day of the exercise.⁶¹ Chinese and Pakistani personnel participating in the 2017 Shaheen VI exercise carried out a research-style air warfare results assessment with their Pakistani counterparts after the completion of the air-to-ground phase, in which one PLA pilot claimed to have learned from his Pakistani counterpart “a great deal of information that could not be found in books.”⁶²

Spreading the Wealth: Circulating Lessons Learned

Dissemination of knowledge and experience gained during foreign training exercises appears to

60. Dong and Su, “Realistic combat Air Force.”

61. Wang Zhen and Xu Shuitao, “国际赛场的‘得’与‘思’” [Thoughts and gains at international competition grounds], 人民陆军 [People’s Army], September 27, 2017.

62. Zhang Gang and Ding Yubao, “风云际会又一年—写在中俄‘海上联合—2017’第二阶段演习结束之际” [Running into clouds and wind for another year—Writings from the ending of the second phase of the Sino-Russian Joint Sea-2017 exercise], 人民海军 [People’s Navy], September 27, 2017.

be arranged on an informal basis. Seminars, briefings, and group instruction are common methods for returned personnel to circulate lessons learned within the broader PLA. Many of these efforts are apparently undertaken at an individual level by returned personnel.

Personnel returning from foreign training exercises are sometimes asked to brief other personnel on their experiences as a way to improve PLA self-study (自主学习). In October 2017, aviators who participated in China-Pakistan exercises were invited to a Southern TC Air Force study session on a 2017 Air Force party committee personnel document titled the 关于聚焦实战、瞄准一流，建设高素质新型飞行人员队伍的意见 (Opinion on focusing on realistic warfare, aiming toward building first-rate, high-quality aviator personnel). The aviators then briefed members of a Southern TC Air Force brigade on foreign military self-study theory and methods.⁶³ More specific topics are also addressed in seminars held within units that have returned from foreign training activities: one October 2017 seminar in a Western TC Air Force brigade reviewed aspects of the China-Pakistan Shaheen VI drill, including mission planning, equipment support, safety management, training research, and technical support.⁶⁴

Other methods for distributing knowledge within the broader PLA appear to be undertaken individually in smaller units, apparently with varying degrees

63. In Chinese, the “research-style air warfare results assessment” is rendered as “研究式”空战效果评估.” See Yang Songsong et al., “Joint drill as grindstone.”

64. Li Yixuan, Wei Jinxin, and Nong Yu, “自我驱动”助力换羽高飞” [“Self-drive” aids high flight], 空军报 [Air Force news], November 7, 2017.

of success. One infantry fighting vehicle company commander in the PLAAF airborne forces noted from foreign training experience that foreign forces strongly emphasized various forms of night training. The commander compiled his knowledge and led his entire company in subject-based night training upon his return to China. Initially his company struggled with the training, until the commander expended further effort to compile his knowledge in accordance with the Four Ables (四会) into a Five-Step Training Method (五步训练法), which eventually led to better nighttime driving results. The Four Ables are the ability to explain (会讲), ability to do (会做), ability to teach (会教), and ability to conduct thought work (会做思想工作). The Four Ables are frequently cited as critical skills for PLA training instructors and commanders.⁶⁵

In some cases, the lessons and experiences of PLA personnel who have participated in foreign training activities are compiled into materials for broader distribution within the PLA. In one instance, PLA Army soldiers from a battalion reconnaissance platoon of an unidentified brigade of the 41st Group Army demonstrated some of the survival skills they learned during the Kowari 2015 exercise conducted with the United States and Australia during a post-exercise review. The returned soldiers also participated in a party committee meeting on training, where they voiced their opinions and led several small groups to facilitate learning. These soldiers later published a practical training manual entitled 野战生存觅食20法 (Twenty methods for field combat survival and foraging) that was likely further disseminated among

65. Yang et al., "Joint drill as grindstone."

the ranks.⁶⁶ Kowari-2016 participants reportedly went on inspection tours throughout China to supplement existing survival learning materials with updated information on weather and environment gleaned from the following year's iteration of the exercise.⁶⁷

Although many of these post-exercise review activities are apparently arranged ad hoc, some indicators suggest parts of the PLA are routinizing and expanding efforts to circulate knowledge obtained from foreign training activities. In August 2018, a PLA Navy Marine brigade held a group training (群众性练兵) on special operations tactics that featured instructors with experience in overseas study, escort task force duty, and foreign training exercises. These instructors passed on their knowledge to 100-man teams selected from each company in the brigade, each member of which then returned to their respective companies to instruct their platoon and squad noncommissioned officers as head instructors (兵教头). These platoon and squad noncommissioned officers then taught these special operations skills to the rest of their enlisted men.⁶⁸

66. Chen Dianhong and Li Yuanjun, “第 41 集团军某旅参加中外联训官兵当上“武教头” [Officers and soldiers from a certain brigade of the 41st Group Army who attended foreign training become head instructors], 解放军报 [PLA daily], November 22, 2015, http://www.81.cn/jwzg/2015-11/22/content_6779645.htm.

67. Wang Zhigang, Zhou Yusong, and Yao Jinjie, “走出国门, 在竞争与协作中获取成长” [Gaining maturity amid competition and coordination upon leaving the country], 人民陆军 [People's Army], October 14, 2017.

68. Di Siyu and Cao Kexuan, “特战技能共享 训练成果固化” [Sharing special warfare capability, solidifying training results], 解放军报 [PLA daily], August 10, 2018, <http://military.people.com.cn/n1/2018/0810/c1011-30220877.html>.

CONCLUSIONS AND FUTURE IMPLICATIONS

Research into how the PLA conducts exercises and specific reports on personnel engaged in foreign training activities yields a number of preliminary analytical conclusions about the role of these activities in PLA personnel development.

First, the PLA appears likely to expand its program of foreign training exercises, affording more opportunities for first-time participants and expanding the reach of lessons learned by PLA personnel. The PLA has strong incentive to increase its participation in these types of exercises: Foreign training exercises represent one of the highest forms of practical military learning for PLA personnel short of service in an actual conflict, and they provide ample opportunity for PLA personnel to test their command, control, and coordination skills under stressful conditions like close foreign scrutiny. The steady rise in PLA foreign training exercises is likely a result of gradual experimentation with foreign training, and high-level directives like the 2018 OMTE that emphasize more foreign training content virtually assure increased participation, assuming continued willingness from foreign counterparts. The PLA will continue to increase the frequency and scope of its participation in foreign training activities, albeit at a pace that favors gradual expansion of topics and exposure for its personnel over a sudden infusion of money and rapidly expanded scope of topics.⁶⁹

Second, the PLA places a particularly strong emphasis on party control of foreign training activities, especially given its view of them as tools

69. Chen, *Principles of military training*, 202.

of military diplomacy as well as high-level training. Party control is manifested throughout the course of a foreign training exercise, from personnel selection controlled by party committees at corps-grade military units and above, to command and coordination of a given exercise through temporary party committees established within exercise direction elements, to post-exercise review through party committee-led seminars, briefings, and other training activities.

Third, the command and control tasks required of exercise direction personnel during exercises place an enormous premium on organizational skills, and the prodigious amount of administrative and procedural work behind the orchestration of exercises is apparently accomplished primarily by members of PLA staff departments and augmentees from military academic institutions. Some PLA academics consider this arrangement problematic: In 2016, PLA theoreticians argued that past cultivation of joint operations commanders focused more on cultivating staff personnel (参谋人员) rather than commanders (指挥员), resulting in situations where commanders were unable to command forces when separated from their staff. During training, commanders frequently relied too heavily upon staff members' suggestions, adjusted orders based upon pre-submitted staff paperwork, and frequently drew conclusions using already-prepared contingency options.⁷⁰ These deficiencies and others are among those identified in the Five Cannots (五个不会), a set of command and leadership deficiencies that realistic exercises are partially meant to remediate.

70. Liu Wei, ed., 战区联合作战指挥 [Theater Joint Operations Command] (Beijing: National Defense University Press, 2016), 309.

The implications of these initial conclusions are potentially far-reaching and extend beyond personnel development. Expansion of foreign training exercises will call for a commensurate expansion in the bureaucratic and organizational infrastructure supporting them, and experiences derived from foreign training exercises writ large may drive more profound changes in PLA command and exercise simulation.

Any sizable uptick in PLA foreign training activities would put greater strain on the bureaucracy that governs personnel participation and the integration of lessons learned into the rest of the PLA. As more and more personnel attend foreign training exercises, the vetting system run by the PLA's political work organs will be expected to keep pace, on top of any lingering adjustments to the 2015 organizational shake-up that remain. The ability of the PLA's political work system to select and vet the appropriate number of personnel remains an important but understudied determinant of the PLA's foreign training aspirations.

At the opposite end of foreign training exercises, the PLA appears poised to implement training methods that will greatly extend its ability to disseminate lessons learned from foreign training exercises to the rest of the force. Chief among the advanced methods being implemented as part of the new-type military talent cultivation system (三位一体新型军事人才培养体系) advocated by Xi Jinping are online courses and a cloud platform linked to the National University of Defense Technology capable of supporting 300,000

online users.⁷¹ These resources will likely fuse with other relevant network resources available at the National University of Defense Technology, including the Military Training Information Network (军事训练信息网), which provides training-related information resources to operational units and PLA military academies.⁷²

An increased tempo of foreign training exercises may also challenge the command culture inherent to the PLA's identity as the armed wing of the Communist Party of China. Although the collective decision-making embodied by party committees provides a lower-stakes command environment for officers who might otherwise be reluctant to undertake sole command responsibility, the PLA will continue to stress quicker decision-making in anticipation of the "compressed command cycle, simplified command procedure, and increased command speed" that characterize joint command in informatized local

71. Yu Qifeng, "破解 '五个不会' 难题要从源头入手" [Breaking the "Five Cannots" must start from the source], 解放军报 [PLA daily], October 13, 2015, http://www.81.cn/jfjbmap/content/2015-10/13/content_125880.htm.

72. Li Xiaoliang et al., "与时代同步 向一流迈进" [Surge forward toward first-rate with the times], 军报记者 [Military correspondent], December 22, 2017, http://jz.chinamil.com.cn/n2014/tp/content_7880351.htm (site discontinued); and Zhao Yanyan, ed., "做数字时代自主可控的先行者" [UCloud is digital age independent, reliable forerunner], 国际在线 [International online], May 25, 2018, http://it.gmw.cn/2018-05/25/content_28962544.htm.

war.⁷³ Nevertheless, the PLA will face increasing difficulty when attempting to complete its command decision-making loop during exercises given the overabundance of command responsibilities of EDD personnel, a shift away from perceived overreliance on staff officers, and the aftereffects of the 2015 personnel reduction. The convergence of these issues may accelerate the adoption of technological decision aids to help speed up command decision-making and ease the administrative and cognitive workload on PLA commanders.

One of the immediate implications of this embrace of technology to aid decision-making is a reinvigorated attempt to collect and use data from training exercises, including foreign training exercises. The demand for this data is already clear: the PLA's exercise assessments are nominally data-driven, but past assessments have been described as overly "manpower-reliant, informal, and unconvincing," and past exercise summaries have suffered from a lack of objective, accurate data.⁷⁴

If the PLA can collect and effectively use even a fraction of the exercise performance data on its systems and personnel that its textbooks call for, it will be sitting atop a trove of information that could make its war games and combat simulations much more realistic. Some PLA theorists recognize that

73. "国防科学技术大学" [National University of Defense Technology], 中国军网 [China military online], July 9, 2007, http://www.mod.gov.cn/service/2007-07/09/content_4085889.htm; and Management Committee, People's Liberation Army military terminology, 320.

74. Zhang Peigao, "论军队指挥改革" [On military command revolution], 中国军事科学 [China military science] no. 1 (2016): 107.

war games struggle to simulate human behavior realistically, frequently failing to replicate realistic opponents, translate broader concepts to more detailed ones, or mimic actual force movements according to actual human behavior, among others. These same theorists regard the use of war-gaming systems as a vehicle to research and develop smarter opposition forces as a critical means of “breaking through the ‘intelligentized’ information systems bottleneck” (突破信息系统智能瓶颈).⁷⁵ Performance data collected on PLA systems and personnel during foreign training exercises could provide a baseline to help the PLA objectively benchmark its forces against those of other powers. This use of data could be particularly applicable to foreign military competitions, which explicitly pit PLA systems and personnel against those of other countries under controlled conditions.

Foreign training exercises and drills will remain an important means by which the PLA prepares its personnel to fight and win the next war. In the immediate term, these foreign training activities provide unparalleled opportunities for PLA personnel to test their military proficiency under high-stress conditions without having to engage in actual combat. In the longer term, PLA participation in foreign training exercises may validate previously identified problems in command responsibilities and drive more profound change in how the PLA commands its forces and trains its personnel through simulation and modeling. Whether the PLA can actualize these applications and more fully use the training and

75. Ning Yingqiu, “Organization and execution of unit assessment.”

personnel development value of these foreign training exercises, however, remains to be seen.

9. CHINA'S HUMAN CAPITAL ECOSYSTEM FOR NETWORK WARFARE

Joe McReynolds and LeighAnn Luce

In recent years, the People's Liberation Army (PLA) has carried out an ambitious reform agenda across nearly every sector of its armed forces and defense industry. The overarching aim of these reforms is to build a force capable of winning "informatized" wars through kinetic and information operations supported by a modernized command, control, communications, computers, intelligence, surveillance, and reconnaissance infrastructure. In late 2015, these reforms culminated in the creation of the PLA Strategic Support Force (解放军战略支援部队) (SSF) as a new information warfare force operating independently of the PLA's traditional services.

Examining the human capital ecosystem that underlies the PLA's development, acquisition, and operational deployment of network weapons offers an opportunity to better understand China's information warfare capabilities. The unique characteristics of the information battlespace have arguably made the human dimension more central to understanding China's development of network warfare capabilities than is the case with the traditional land, air, sea, and nuclear domains.

As of 2019, however, the personnel ecosystem for information warfare operations is in a state of greater flux than any other segment of the PLA. The creation of the SSF was only the start of a long series of organizational reforms. China's elevation of military-civil fusion (军民融合) (MCF) to the level of a national strategy has led to the launch of new systematic

initiatives which have broadened the SSF's access to civilian talent pools. The PLA is embarking on a major push into civilian recruitment for both civilian cadre and direct-recruit noncommissioned officer (NCO) positions. Finally, the military's technical academic institutions that have historically focused on network and electronic warfare research have been completely reorganized. In short, the Chinese military is embarking on a massive reordering of its human capital ecosystem for information warfare.

INTRODUCTION

In recent years, the PLA has carried out an ambitious reform agenda across nearly every sector of its armed forces and defense industry. The overarching aim of these reforms is to build a force capable of winning informatized wars through kinetic and information operations supported by a modernized command, control, communications, computers, intelligence, surveillance, and reconnaissance infrastructure. In late 2015, these reforms culminated in the creation of the SSF as a new information warfare force operating independently of the PLA's traditional services, signaling that the question of how to achieve superiority in the information domain—and, in particular, the network domain—has become central to the PLA's strategic thinking and organizational planning. Beyond the context of direct warfighting, network attack and defense tools are being deployed by both the PLA and China's intelligence services for a broad and sustained campaign of industrial espionage, intelligence collection, influence operations, and battlespace preparation.

Despite network warfare's centrality to the PLA's warfighting, doctrinal development, and force planning, relatively little is known about the development of network weapons such as zero-day exploits and supply chain penetration vectors, including the people who create them. This lack of knowledge is partially a reflection of the lack of open-source information available to analysts regarding the development of network weapons when compared with conventional weapons platforms, such as fighter aircraft or naval platforms. But network weapons have the potential to be every bit as decisive in a conflict as conventional arms; in the words of one Chinese defense industry scholar, they are "the sharp swords of information warfare."¹

Examining the human capital ecosystem that underlies the PLA's development, acquisition, and operational deployment of network weapons offers an opportunity to better understand China's information warfare capabilities. The unique characteristics of the information battlespace (including the network domain, the electromagnetic domain, and the psychological domain) have arguably made the human dimension more central to understanding China's development of network warfare capabilities than is the case with the traditional land, air, sea, and nuclear domains. And due to the strong overlap in skills and education between the network weapons industry and the civilian information security industry, the PLA's recruiting of network weapons personnel is more transparent to outside observers than the PLA's recruitment of other types of personnel.

1. Chen Yongsheng, *军事高技术与信息化武器装备* [Military advanced technology and informatized weapons] (Beijing: National Defense Industry Press, 2009), 373.

If network weapons are in fact the “sharp swords” of information warfare, much can be learned from studying the bladesmiths.

As of 2019, however, the personnel ecosystem for information warfare operations is in a state of greater flux than that of any other segment of the PLA. The creation of the SSF nearly four years ago was only the start of a long series of organizational reforms, and several key research institutes (RIs) were temporarily housed under the SSF before being moved elsewhere. China’s elevation of MCF to the level of a national strategy has led to the launch of new systematic initiatives that have broadened the avenues through which the SSF can tap into civilian talent pools. The PLA’s major push into civilian recruitment for both civilian cadre and direct-recruit NCO positions has also seen the phasing out of older approaches, such as the National Defense Student program. The military’s technical academic institutions that have historically focused on network and electronic warfare research have been completely reorganized under the SSF, and the PLA’s broader reorganization of its academic institutions has given organizations such as the Academy of Military Sciences (均系科学院) (AMS) new roles to play in military science and technology research. The Chinese military is embarking on a massive reordering of its human capital ecosystem for information warfare that matches the scale of its strategic and institutional reorganization of its operational units.

This chapter begins with a brief explanation of how differences between China’s information warfare ecosystem and its traditional defense sectors influence the needs of the SSF’s human capital ecosystem. These unique characteristics influence the role that human

talent plays in the SSF's research, development, and acquisition (RD&A) processes; its operational units; and its recruitment.

The chapter then examines the PLA's in-house recruiting pipeline for those who develop and operate its network weapons, ranging from the demographic makeup of recruits to the organizational structures they occupy within the military. Particular emphasis is given to the PLA Information Engineering University (解放军信息工程大学) (IEU), which expanded last year to become an umbrella institution encompassing the former PLA University of Foreign Languages (解放军外国语学院). The IEU, which has now been established as the primary educational institution of the SSF's Network Systems Department (网络系统部) (NSD), plays a key role in developing the NSD's human capital and network weapons. This chapter also looks at the evolving interconnections between civilian institutions and the PLA human talent pipeline and addresses recruitment and research at civilian universities, defense contracting by civilian firms, interactions with Chinese hacker groups, and talent discovery and retention challenges that arise as the PLA is forced to compete with the private sector to recruit highly skilled information security researchers.

The study concludes by assessing visible trends for China's network warfare human capital ecosystem, including potential obstacles to further improvement, institutional contradictions that have yet to be settled, and the PLA's shifting balance between the recruitment of civilian talent and the recruitment of military talent.

UNIQUE CHARACTERISTICS OF NETWORK WEAPONS SHAPING THE PLA'S HUMAN CAPITAL REQUIREMENTS

Network weapons are in many ways as integral to the modern peacetime and wartime operations of the PLA as conventional weaponry. But network weapons possess multiple unique characteristics that are difficult to map onto the conventional Chinese defense RD&A cycle. Several of these peculiarities directly shape the human capital ecosystem underlying the development of network weapons. First, PLA tool and exploit developers and “trigger pullers” actively engaged in computer network attack and computer network exploitation do not come to their respective positions from completely distinct career and educational tracks, as is nearly universal in other military domains. Although the precise division between these billets within the PLA is not described in public writings, the personnel who develop network attack tools and the personnel who deploy them often work alongside one another in specific military units. These billets appear to share similar career tracks and emerge from the same military and civilian educational institutions.

These commonalities are unheard of in other defense sectors. Such a situation is akin to the researchers and engineers responsible for producing a fighter aircraft sharing military units, career tracks, and educational backgrounds with the pilots who fly them into combat. To account for the intertwined educational and career paths of network weapons development and operational personnel within the PLA, this study attempts to examine the ecosystem encompassing the two as an integrated whole.

Second, the PLA does not acknowledge the existence of any given network weapon it has developed, and, until the creation of the SSF, it did not acknowledge the existence of its network attack forces. As a result, network weapons processes are much less transparent than the processes of other Chinese defense RD&A programs, as are the identities, organizational structure, and career paths of the personnel involved. In the absence of transparent information regarding network weapon development, one must piece together numerous disparate strands of information to offer a meaningful picture of these RD&A systems, and major gaps remain in open-source knowledge.

Third, network weapons are often modular in nature and iteratively developed, carrying a short shelf life if they are not constantly updated and revised. Production and deployment proceeds rapidly and continuously, with weapons being produced, tested, modified, and repurposed on an ad-hoc basis, defying the traditional Chinese defense RD&A life cycle. A PLA Navy ship may expect to see many years of active service, whereas a network weapon making use of a particular zero-day exploit may have a useful life span measured in days or even hours. Once in use, whether by the PLA or another unrelated entity that has independently discovered the same attack vector, an adversary may detect the weapon and develop countermeasures at any time. This time sensitivity necessitates a far greater degree of organizational proximity and career track overlap between weapon developers and end users than is seen in other defense sectors.

Fourth, the development of offensive network weapons and the development of defensive

information security technologies are intertwined to a degree unseen in other defense sectors. Most technologies that defend against conventional weapons systems operate according to well-understood principles of ballistic physics; thus, offensive and defensive technology developers have very little interaction. Network defenses, by contrast, must be constructed to function against never-before-seen threat vectors, and the precise effects of malicious code cannot be definitively known until the code is executed. To build effective network defenses, a nation-state must be at the forefront of predicting and discovering network warfare threat vectors.

This natural intertwining of network attack and defense research in turn influences the PLA's human capital needs and its interaction with the civilian information security industry. Talented researchers with a civilian information technology (IT) or information security education can be directly recruited into the military without a lengthy process of reorientation toward defense technical work, and civilian code and software can be integrated into attack tool development. But this shared pool of recruits results in the PLA directly competing with China's far more lucrative private sector for technical talent.

Fifth, network weapons frequently contain an element of social engineering. Some attack vectors may, for example, require an unsuspecting adversary who receives an e-mail to click a link to an infected website or to open a malicious file attachment; this is known as "spear phishing." As a result, trained defense and intelligence linguists with appropriate cultural and contextual knowledge exist within the human capital ecosystem of network weapons development.

Finally, network weapons are heavily used for peacetime espionage in addition to their military capabilities. The same personnel, threat vector, and operating infrastructure can even be used simultaneously for both intelligence collection and battlespace preparation operations. Though this sharing of resources opens up strategic possibilities for the PLA, it also creates unique command and personnel challenges. PLA network warfare personnel are poorly compensated compared to their private-sector counterparts, and foreign information security analysts have identified numerous occasions where PLA personnel appear to have “freelanced” by using military infrastructure to collect intelligence for outside clients.²

THE PLA'S INTERNAL HUMAN CAPITAL ECOSYSTEM FOR NETWORK WARFARE

The PLA has historically contained several different types of institutions engaged in both the development of information weapons and the training of personnel for information warfare, including operations units such as technical reconnaissance bureaus (技术侦察局) (TRBs), numbered research institutes (RIs), and military academic institutions. Through the end of the Hu Jintao era, this human capital ecosystem was centered on the Central Military Commission, which directly oversaw the National University of Defense

2. Pang Qingyun, “战略支援部队某部20余名在编现役干部转改文职人员纪实” [More than 20 members of the Strategic Support Force, who are in the process of converting from active cadres to civilian personnel], 解放军报 [PLA daily], July 11, 2018, <http://military.workercn.cn/32821/201807/11/180711090317195.shtml>; and Mandiant, *APT1: Exposing One of China's Cyber Espionage Units* (Alexandria, VA: Mandiant, February 18, 2013).

Technology (国防科技大学) (NUDT) and the IEU, and the former General Staff Department (总参谋部) (GSD), which contained the information operations-focused 3rd and 4th Departments (三部 and 四部) (3PLA and 4PLA); the subordinate-numbered RIs (such as the former GSD 56th, 57th, and 58th RIs); and educational institutions with relevant portfolios, such as the former PLA Electronic Engineering Institute (解放军电子工程学院).

But in the aftermath of the creation of the SSF and the reorganization of China's military academic institutions, the institutional landscape for the SSF's human capital ecosystem has shifted markedly. The network attack-focused 4PLA in particular has been carved up into its constituent parts, rather than being transferred to the SSF wholesale. Many of 4PLA's operational units now reside within the SSF's NSD, but its former headquarters were reconstituted under the Joint Staff Department as the new Network-Electronic Bureau (网络电子局); this organization is likely to oversee the management of network and electronic warfare missions across the entire Chinese military.³ Meanwhile, 4PLA's primary educational institute, the Electronic Engineering Institute, was placed under the NUDT and transformed into the Electronic Countermeasures Institute (国防科技大学电子对抗学院), even as the IEU moved to the SSF NSD and incorporated other educational institutions with related areas of focus.

Perhaps the most unusual of the recent changes to the SSF's research and training ecosystem has been the

3. For a detailed discussion of the evidence on this point, see John Costello and Joe McReynolds, *China's Strategic Support Force: A Force for a New Era* (Washington, DC: National Defense University Press, 2018).

case of the GSD's numbered RIs. Although the relevant RIs moved to the SSF following its creation, in mid-2017, several were moved back to the Central Military Commission, where they are now located under the AMS. The most notable of these is the former GSD 54th RI, which appears to have become the Network Electronic Countermeasures Institute (网电对抗研究所) under the AMS's new Systems Engineering Academy (军事科学院系统工程研究院). According to Chinese media reports, AMS is now being positioned as a leader in military scientific research for the whole of the PLA, combining its traditional work on military theory with defense science and technology research.⁴

This reorganization represents a dismantling of the previously hard and fast divisions between the roles of the AMS and the NUDT, as the latter maintains its focus on both personnel training and core defense science and technology research. Although PLA reporting has portrayed this transition as fitting the PLA's need to more closely align and intertwine military strategy with its science and technology development efforts, the work of the numbered RIs has historically been more granularly focused on applied research, including engineering and capabilities testing.⁵ Indeed, even the RIs' research projects launched after

4. Ma Haoliang, “建军90周年：军校改革—三院校作龙头引领新格局” [The army's 90th anniversary: Military academy reform—Three colleges and universities take the lead to guide a new structure], *Ta Kung Pao*, July 29, 2017, <http://news.takungpao.com/mainland/focus/2017-07/3477971.html>.

5. “军事科学院新领导班子亮相：贺福初少将出任副院长” [Academy of Military Science new leadership: Major General He Fuchu becomes deputy director], *3g.163.com*, n.d., <https://3g.163.com/all/article/CTL4O3OC0001899N.html> (site discontinued).

this transition appear to continue that focus.⁶ To be fair, the PLA has designed the SSF from the start to interface more closely with China's strategic research bodies, an intent exemplified by high-level personnel moving in both directions between the AMS and the SSF (including the SSF's first commander, Gao Jin). Nevertheless, this move appears unusual, raising the possibility bureaucratic politics may have played a significant role in shaping this round of the PLA's reforms.

Network Warfare Training at Defense Technical Schools

No matter their location within the PLA, these institutions attract human capital from multiple sources, including straightforward PLA recruitment, direct-recruit NCOs from civilian universities, and civilian cadres. Although Chinese citizens with relevant skill sets can participate in military work in a variety of ways, the bulk of China's network warfare personnel nevertheless still progress through a scientific and technical military academy, whether their ultimate role within the system will be operational or research-focused.

Therefore, examining the selection, cultivation, and retention of information warfare talent is necessary, beginning with the PLA academic system, including defense technical schools such as the NUDT and IEU.

6. “中央军委装备发展部信息系统局关于2017年重大专项第一批网上公开发布指南项目入围单位公告” [CMC Armament Development Department's Information Systems Bureau announcement on the 2017 major projects first online published guidelines for shortlisted units], Sohu, September 19, 2017, http://www.sohu.com/a/192948967_465915.

By understanding the academic tracks, incentive structures, and recruiting policies for information warfare personnel at the undergraduate, master's, and PhD levels, as well as retention and morale issues within the SSF, one can gauge the current status of China's efforts to shape its workforce according to the demands of modern information warfare and the PLA's strategic realignment.

Undergraduate programs are a focal point in the PLA's information warfare human capital ecosystem for multiple reasons. Although undergraduates lack the technical knowledge of graduate students, their academic track assignments at this stage appear to determine their future careers within the PLA, including the crucial distinction of whether they proceed down a command/operational career track or a technical specialist one. Through their relatively large numbers, graduates of these programs form the backbone of the PLA's network warfare workforce.

The PLA pays conscious attention to questions of demographics in recruitment. Since 2014, the PLA's technical educational institutions have required that new undergraduates be between 17 and 20 years of age, except in the case of reserve officer trainees and other special personnel. Many academic tracks relevant to information warfare have historically only accepted men, or accepted very few women, though over the past few years some non-command tracks

in network security have been opened to women.⁷ Nevertheless, the primary area of PLA education with substantial female recruitment and relevance to information operations remains the linguist specialist track. PLA technical universities also attempt to ensure a balance of regional representation, with the necessary test scores required for entry varying from province to province.⁸

Technical universities of the PLA also give admissions preferences to those who possess particularly desirable technical skills.⁹ Additional credit is given in the admission of children of PLA members, as well as students who have received nationally recognized academic merit awards.¹⁰ Admitted students must pass a psychological exam, which includes a Myers-Briggs personality typology, with the score needed to pass the exam varying based

7. “青年学生政策答记者问” [Responses to reporter’s questions on young student policies], Chinese People’s Liberation Army (PLA) Strategic Support Force (SSF) Information Engineering University (IEU) (website), n.d., <http://zhaosheng.plaieu.edu.cn/a/zhaoshengzhengce/2014/0528/323.html> (page deleted from site); and “2018军校招生计划” [2018 military academy admissions program], AR Web, n.d., <http://www.xxyzh.net/zuoye/gk2018/2018军校招生计划.pdf>.

8. “2013年信息工程大学全国录取分数线” [2013 PLA IEU national admissions scores], 81.cn, April 23, 2014, http://www.81.cn/rdzt/2014/0421bkjx/2014-04/23/content_5878152.htm.

9. “Responses to reporter’s questions.”

10. “解放军电子工程学院2013年招生简章” [PLA EEI 2013 admissions guidelines], 81zbw, June 13, 2013, <http://81zbw.com/Article/jsyx/25561.html> (site discontinued).

on one's personality type.¹¹ Schools of the PLA also ask for the political status of their incoming students, which is essentially a recommendation that must be transferred from their prior educational institution. Generally speaking, incoming undergraduates do not have to have actually joined the Communist Party of China already; even a mere desire to join the party can be indicated via relevant documents (入团志愿书).¹²

Contrary to reasonable expectations, the majority of information warfare students at universities such as the IEU have historically been civilian cadres (文职干部) rather than PLA officers in training, who then received unit assignments upon graduation.¹³ But, as discussed in greater detail below, the civilian cadre system is being shut down and replaced by a unified civilian personnel (文职人员) system, which may soon dramatically alter the balance of the IEU's undergraduate population.

The NUDT's core campus offers two non-command academic tracks relevant to network warfare: a software engineering (软件工程) track devoted to training students in software development and analysis for network warfare purposes and a network engineering (网络工程) track devoted to

11. “研究生招生” [Graduate admissions], PLA SSF IEU, n.d., <http://zhaosheng.plaieu.edu.cn/channels/252.html>; and “军队院校招收学员体格检查标准” [Physical examination standards for military academy recruitment], PLA SSF IEU, March 28, 2014, <https://web.archive.org/web/20140807014940/http://zhaosheng.plaieu.edu.cn/a/zhaoshengzhengce/2014/0328/309.html>.

12. “2012级新生相关问题说明” [Relevant questions for 2012 students answered], PLA SSF IEU, March 20, 2014, <https://web.archive.org/web/20150222054248/http://zhaosheng.plaieu.edu.cn/a/benkezhaosheng/2014/0320/283.html>.

13. “Responses to reporter's questions.”

understanding network technologies.¹⁴ The NUDT Electronic Countermeasures Institute (formerly the Electronic Engineering Institute), however, offers a wider array of command (operations officer) and non-command (technical officer) academic tracks. Non-command technical officer tracks include information engineering (信息工程), with a focus on attacking and defending military networks, and network engineering (网络工程), with a focus on civilian network security.¹⁵ The institute's command-oriented electronic warfare command and engineering (电子对抗指挥与工程) track offers two foci: attacking and defending communications networks and attacking and defending information systems.

The IEU, by contrast, offers a different range of career tracks and strives for a different demographic mix. The IEU is unique among the major institutions in that its non-command network engineering (网络工程) track, which is explicitly devoted to producing network attack and defense technical cadres (网络攻防技术干部), admits both men and women.¹⁶ The IEU offers multiple command tracks, including information security (信息安全) and information engineering (信息工程), and a majority of the IEU's incoming freshmen officers are command officers (指挥军官) rather than technical specialists.¹⁷

14. “非定向” [Undirected], Hebei International School, n.d., <http://www.sjz42.com/UploadFiles/Article/2014-6/2014061011403955992.doc>.

15. “Undirected.”

16. “Undirected.”

17. “2013年度青年学员招生计划” [2013 student youth recruitment guidelines], PLA SSF IEU, March 20, 2014, <https://web.archive.org/web/20150222054525/http://zhaosheng.plaieu.edu.cn/a/benkezhaosheng/2014/0320/285.html>.

Advanced education programs such as master's and PhD programs within PLA defense technical universities also play a central role in the continuous cultivation of the PLA's information warfare research community, both by conducting advanced research themselves and by producing technical experts who go on to inhabit the SSF and Central Military Commission's other relevant institutions. At the graduate level, the PLA schools have established their own unique avenues for attracting special network warfare talents.

Support for PhD research on network warfare at the NUDT is extensive, as the school is a leader in network attack and defense research.¹⁸ The school has received government funding for its network attack and defense research at least as far back as the beginning of the 10th Five Year Plan, suggesting significant prioritization from the central government.¹⁹ Historically, research published by NUDT academics on network attack and defense has generally been linked to its College of Computers, College of Information Systems and Management, and College of Electronic Engineering.²⁰ The NUDT takes PhD students specifically for network attack and

18. “学院介绍” [Introduction to the university], National University of Defense Technology, June 28, 2010, <https://web.archive.org/web/20150928021924/http://www.nudt.edu.cn/ArticleShow.asp?ID=40>.

19. “国防科学技术大学2008年博士研究生招生简章” [NUDT 2008 PhD admissions guide], Hujiang, January 15, 2010, <https://www.hjenglish.com/new/p343403/>.

20. See, for example, Liu Bo et al., “基于两阶段感染过程分析的蠕虫传播模型SSI” [SSI, a worm propagation model based on the analysis of the two-stage infection], 国防科技大学学报 [Journal of National University of Defense Technology] 32, no. 3 (2010).

defense research within the College of Computers, although students in a range of other NUDT schools of also conduct relevant research.²¹

Within the College of Computers, the Network and Information Security Laboratory (网络与信息安全研究所) conducts extensive network attack and defense research, including space-network research with direct relevance to higher-level information warfare applications.²² The NUDT's PhD program does not appear to be designed as a means of onboarding civilian talent into the defense PhD system; applicants must either be a fresh graduate of a military master's degree program or an active-duty PLA soldier who has already obtained a master's degree.²³ The NUDT's total number of billets related to network attack and defense has tripled over the past several years.²⁴

The IEU, by contrast, has long had an allotment of PhD positions specifically available to persons without a military background, including full-ride scholarships for students who have recently earned

21. "NUDT 2008 PhD admissions guide"; and "国防科学技术大学2007年博士研究生招生简章" [NUDT 2007 PhD admissions guide], Hotbei Information, n.d., <https://www.hotbak.net/key/国防科学技术大学2007年博士学位研究生招生简章考研教育网.html>.

22. "网络与信息安全研究所" [Institute of Network and Information Security], National University of Defense Technology, updated June 28, 2010, <http://web.archive.org/web/20120209160356/http://www.nudt.edu.cn/ArticleShow.asp?ID=46>.

23. "NUDT 2008 PhD admissions guide."

24. "Institute of Network and Information Security."

a master's degree from Project 985 universities.²⁵ In addition to recruiting fresh master's graduates and active-duty soldiers, the IEU's PhD program offers admission to military personnel who have earned a master's degree at some point in the past and worked six years or more in a field closely related to their proposed PhD course of study.²⁶

The IEU also has a special preferential recruitment initiative for top talent that requires prospective graduate students concretely demonstrate their offensive network warfare skills in one of several ways. These special avenues include earning a third-place prize or higher at a Capture the Flag information security competition, contributing a new zero-day vulnerability to the China National Vulnerability Database (国家漏洞库), or otherwise achieving "breakthrough results" that demonstrate "special expertise" in the field of network security.²⁷ Generally speaking, active-duty officers are also shown some leniency in quantitative assessments for

25. "解放军信息工程大学研究生院" [PLA IEU Graduate Institute], PLA SSF IEU, n.d., <http://zhaosheng.plaieu.edu.cn/a/yanjiushengzhaosheng/2014/0225/304.html> (page deleted from site).

26. "PLA IEU Graduate Institute."

27. "网络空间安全学科硕士研究生特殊人才 选拔工作报名通知" [Notice of registration for special talents selection for master of science in cyberspace security], PLA SSF IEU, March 26, 2018, <http://web.archive.org/web/20180405050413/http://zhaosheng.plaieu.edu.cn/contents/252/912.html>.

IEU graduate-level admissions compared to fresh graduates of PLA educational institutions.²⁸

Research institutes in the GSD, such as the former 54th RI, the portfolio of which is relevant to information warfare weapon development, also admit graduate students and grant their own graduate degrees. Although the RIs are more opaque in their selection process and academic track offerings than the PLA's defense technical schools, they are known to broadly follow the standard military school application process, including completion of relevant standardized exams.²⁹

Admission to any PhD program at a defense technical school or RI generally requires scoring highly on a standardized entrance examination that is separate from national graduate admissions testing regimes and administered in-person over a two-day period. The test's contents are specific to the school administering it.³⁰ As with undergraduates, all PhD applicants to the IEU and NUDT also must pass a standard ideological checklist that contains criteria such as good moral character, political reliability (this appears to be a formal certification, with 政审材料 provided as evidence), and a clean legal record.³¹

28. “公布2014年博士研究生入学考试军人考生最低录取分数线” [Announce the minimum admission scores for military candidates for the 2014 PhD entrance exam], PLA SSF IEU, March 28, 2014, <http://web.archive.org/web/20140720151016/http://zhaosheng.plaieu.edu.cn/a/yanjiushengzhaosheng/2014/0328/307.html>.

29. “2014年中国人民解放军总参第56研究所考研成绩查询入口” [2014 entrance examination results of the 56th Research Institute of the People's Liberation Army], Liuxue86, February 17, 2014, <http://www.liuxue86.com/a/1916252.html>.

30. “PLA IEU Graduate Institute.”

31. “PLA IEU Graduate Institute.”

In addition to technical talent, many forms of network operations require special support from linguist personnel. In addition to teaching standard technical English, a subject that is mandatory for the software engineering and network security tracks, the IEU's Luoyang campus, formerly known as the University of Foreign Languages, produces the bulk of linguistic talent for SSF network weapon production and deployment.³² The school has specific recruiting quotas from individual provinces, as well as for each foreign language's academic track.³³ The IEU's language training places its students on technical officer tracks, rather than command or support tracks.³⁴ The IEU routinely hires foreign teachers to conduct its students' language training; although this is not an uncommon practice for defense language schools globally, the foreign nationals in question may nevertheless effectively be training the soldiers who will one day conduct espionage operations against their home countries.³⁵

Although the IEU's Luoyang campus is preeminent in this linguistic support role, it is not alone; the IEU's main campus has offered graduate linguistic training dating back to before its merger with the University of Foreign Languages, a program which appears to be directly aimed at personnel who will be assisting SSF

32. John Pike, "Third Department," Federation of American Scientists, updated April 15, 2000, https://fas.org/irp/world/china/pla/dept_3.htm.

33. "解放军外国语学院" [PLA University of Foreign Languages], China Great Wall Internet, n.d., http://service.cgw.cn/lywy/Show_Article.asp?unid=238 (site discontinued).

34. "Undirected."

35. "PLA University of Foreign Languages."

NSD operations.³⁶ In addition to specialized linguistic support personnel, skill requirements listed in job postings for information operations billets within the SSF and TRBs appear to indicate that even technical staff regularly use English-language skills in support of their work.

Morale and Status of PLA Network Warfare Personnel

Historically, one of the persistent challenges the PLA has faced in cultivating human capital for network warfare has been offering competitive salaries, benefits, and working conditions to soldiers with relevant skill sets. Unlike in many other domains of warfare, the skills necessary to conduct and support network operations are often (though not always) highly valued in the Chinese private sector. As the PLA has developed programs and reward systems to attract and retain specialized talent, information operations personnel have frequently been among the most targeted for new initiatives. Although drawing definitive conclusions about the morale of PLA information operations personnel is difficult due to the limited availability of public sources, personnel in the former GSD 3PLA's network warfare program were seemingly unhappy during the Hu Jintao era, a situation which a range of programs over the past decade has attempted to rectify.

36. Xie Weibo, "2014年硕士研究生招生专业目录" [2014 master's student specialization directory], PLA SSF IEU, March 20, 2014, <http://web.archive.org/web/20140720145959/http://zhaosheng.plaieu.edu.cn/a/yanjiushengzhaosheng/2014/0320/290.html>.

One network weapons developer and graduate of an IEU master's program, Mr. Wang, who goes by the Internet handle "Rocy Bird," published a series of firsthand accounts from 2006 to 2008 of the drudgery and social isolation his work in an unnamed Shanghai TRB entailed, attracting the attention of Chinese netizens.³⁷ Wang cited his finances as a particular problem; although he was doing comparatively well for himself relative to other members of the PLA of his age, when compared with members of his school cohort who entered the private sector, his wages were paltry, particularly in light of Shanghai's high cost of living. Furthermore, Wang witnessed selfish largesse by his superiors that undercut the PLA's ostensible ethos of sacrifice for the common good. As detailed in the 2013 Mandiant report on PLA Unit 61398, prior to the creation of the SSF, 3PLA TRB members would sometimes seek out freelance side jobs in white-hat and gray-hat software development to augment their incomes, with some even turning to low-level criminal activity and hacking activities to enrich themselves.

Perhaps in an attempt to counteract these negative trends in morale, in 2011 the PLA introduced special subsidies (技侦专业岗位津贴) for personnel holding specialized technical reconnaissance positions (技术侦察专业技术职务). This subsidy policy applied to both military officers and civilian cadres working in technical reconnaissance positions, reflecting the prevalence at the time of civilian cadres (in addition to PLA technical officers and NCOs) being employed in these positions. Categories of work that qualified for

37. Barbara Demick, "China Hacker's Angst Opens a Window onto Cyber-Espionage," *Los Angeles Times*, March 12, 2013, <http://articles.latimes.com/2013/mar/12/world/la-fg-china-hacking-20130313>.

subsidies included cryptanalysis, intelligence analysis, scientific translation, signals and communications intelligence, technical and development research, technical reconnaissance equipment operation, and a wide range of specializations in information security. A system was also put in place for top-tier personnel (一等标准的人员) to earn larger than normal subsidies, provided they met stricter examination standards. According to Wang, network warfare TRBs have also offered year-end performance bonuses as an additional financial incentive.³⁸

These subsidies appear to continue in some form under the SSF's new recruitment system. The subsidies have been offered for positions in units now directly subordinate to the SSF and to information operations personnel in military theaters and PLA Air Force and Navy intelligence departments. During the Hu era, subsidies for information operations personnel in the PLA Air Force and Navy required a record to be filed with the 3PLA, with the larger subsidies for exceptional personnel requiring direct examination and approval by 3PLA; whether a similar arrangement persists under the SSF is unclear.³⁹ Incentive payments like these may take the form of "subsidies, bonuses, or allowances" rather than salary to minimize the soldiers' tax burden because the Chinese tax system

38. "官兵生活待遇政策200问" [200 questions regarding policy on officers' living situation], China Military Online, October 9, 2011, http://www.mod.gov.cn/service/2011-10/09/content_4303211.htm.

39. "军人工资福利待遇政策, 干货真不少!" [Military wages and benefits policy, it's really not paltry!], Sohu, n.d., http://www.sohu.com/a/232040248_181845 (site discontinued).

differentiates between salary and other forms of payment.⁴⁰

The SSF has historically competed for personnel with both the private sector and China's civilian government. Most notably, both the SSF NSD and the Ministry of State Security (国家安全部) actively recruit from a similar pool of talented undergraduates at civilian scientific and technical schools with relevant specialties.⁴¹ But during the Hu era, the 3PLA seemingly developed a negative image among the skilled students it was trying to attract. For example, when a graduating technical student at Beijing University of Posts and Telecommunications—a civilian school with significant PLA ties—directly requested advice on the relative merits of employment with the PLA and the Ministry of State Security on a university forum, the consensus among the student's peers was the Ministry of State Security position was superior on multiple fronts. Because Ministry of State Security employment is considered a civil service position, it enables movement elsewhere within the Chinese government that military enrollment does not. According to students on the forum, former military technical cadres, by contrast, generally faced significant difficulty in applying for civil service positions because their skill sets were not always prized highly.⁴²

Although the promise of a free education ensured the PLA continued to produce an ample

40. Demick, "China Hacker's Angst."

41. "Military wages and benefits policy."

42. Dennis Blasko, *The Chinese Army Today: Tradition and Transformation for the 21st Century*, rev. ed. (Abingdon, UK: Routledge, 2012), 63.

supply of new technical talent through its dedicated education pipelines, China's military and civilian leadership recognized this sense of disadvantage and dissatisfaction posed longer-term retention challenges for the PLA's information operations institutions because its officers and civilian cadres generally possess skill sets that are valued in the private sector.

In recent years, SSF recruitment has attempted to shift this perception by offering special perks for technical personnel with advanced degrees, including entering the PLA with a higher rank and benefits.⁴³ But perhaps the most radical shift toward grappling with this problem directly has been the PLA's transition away from civilian cadres toward a new, unified civilian personnel system. The new system, which was brought into operation in summer 2018, seeks to address this imbalance through multiple avenues, including giving PLA civilian technical personnel "the corresponding rights of state employees in accordance with the law" and substantially increasing their compensation relative to that of the old civilian cadres.⁴⁴ State media reporting on the system's creation suggests improving the SSF's talent pipeline was a major consideration in the system's design.⁴⁵

Combined with the SSF's special recruitment incentives, the new system appears to offer marginally higher compensation for serving as civilian personnel within the SSF than for taking up a civilian government

43. "国家安全部VS总参三部" [Ministry of National Security vs. Three General Staff], Tianya Club, October 16, 2009, <http://bbs.tianya.cn/post-188-567594-1.shtml>.

44. "Ministry of National Security vs. Three General Staff."

45. "战略支援部队直接接收研究生入伍招聘信息" [SSF direct postgraduate recruitment information], Xi'an Jiaotong University, n.d., <http://info.xjtu.edu.cn/info/1017/19328.htm>.

post. Nevertheless, even articles in official Communist Party of China media about former SSF civilian cadres transitioning into the new system note they have financially superior job opportunities in the private sector.⁴⁶ Because civilian cadres have the choice of demobilization rather than conversion into the new system if they so desire, a substantial outflow of SSF personnel into the private sector may occur during this transition period.

THE SSF AND CHINA'S CIVILIAN HUMAN CAPITAL ECOSYSTEM

Over the decades, the PLA's network warfare programs have transitioned through several different modes of engagement with the civilian economy, in large part due to the bulk of China's IT talent being concentrated there. Early engagement with the unreliable and often anarchic "patriotic hacker" community gave rise to a lasting PLA commitment to build up a more reliable human capital ecosystem, including both the internal expansion of training and research at the PLA's educational institutions and external engagement with private sector information security companies. In the Xi Jinping era, both the 2013 elevation of MCF to the level of national strategy equal to military and economic development and the major military reforms launched at the end of 2015 have kicked off a new era of reshaping how the SSF

46. "战略支援部队面向社会公开招考文职人员政策宣讲会" [SSF introduces policies for open recruitment from society], Haitou global, July 18, 2018, <https://xjh.haitou.cc/article/642241.html>.

taps into civilian talent.⁴⁷ From 2017 onward, these reform processes have increasingly resulted in major concrete changes, including the transition from the civilian cadre (文职干部) and national defense student (国防生) systems toward an emphasis on civilian personnel recruitment (文职人员) and direct-recruit NCOs (直招士官).

Overall, the center of gravity in the PLA's human talent pipeline for network operations has shifted over the past decade toward formally integrating civilian human capital on multiple levels, including research and training collaboration with civilian companies and universities, network warfare academic competitions aiming to identify new talent, and recruitment initiatives designed to attract top civilian technical talent into the SSF.

Transition from Civilian Cadres to Civilian Personnel Recruitment

Over the past year, the SSF has dramatically altered its pathways for recruiting civilian talent to serve in the PLA. Perhaps the change with the biggest impact was the winding down of the PLA's civilian cadres (文职干部) program, which has historically been one of the primary means of civilian technical specialists entering the SSF as well as the PLA scientific and technological research ecosystem more broadly. In accordance with the Regulations on the Civil Service

47. “学习贯彻习近平强军思想 开创文职人员工作新局面” [Studying and implementing Xi Jinping's thought of strengthening the army and creating a new situation for the work of civilian personnel], Military-People's Daily Online, January 24, 2018, <http://military.people.com.cn/n1/2018/0124/c1011-29783604.html>.

Cadres of the Chinese People's Liberation Army (中国人民解放军文职干部条例), civilian cadres in the PLA were appointed as active service personnel, wearing PLA uniforms and holding parallel civilian grades and ranks that corresponded to the military hierarchy.⁴⁸ From the perspective of SSF personnel, entering the civilian cadre system has meant a lifestyle more akin to military service than civilian life.⁴⁹

Separately from the system's value to the SSF, the civilian cadre system attracted strongly negative attention from Chinese policy makers and the Chinese media and public for the ways in which it enabled mere artistic performers to advance to the level of "singing generals."⁵⁰ Photos of civilian cadres with luxury cars and other trappings of corrupt wealth spread virally on the Chinese internet for years, attracting direct condemnation from Xi Jinping. By transitioning to a newly unified civilian personnel (文职人员) system, China hopes to both improve the SSF's access to specialized human capital and excise an embarrassing locus of waste and corruption.⁵¹

The PLA's new civilian personnel system is designed to accommodate a large expansion of the

48. Qingyun, "More than 20 members."

49. Bai Wangang, "军民融合的六大动因" [Six major drivers of military-civil fusion], 国资报告 [State-owned assets report], 2018, <http://www.cnki.com.cn/Article/CJFDTOTAL-GZBG201804012.htm>.

50. "再见, 文职干部, 谢谢你们" [Goodbye, civilian cadres, thank you], Xw.qq, November 15, 2017, <https://xw.qq.com/cmsid/20171115A04WXU00> (page deleted from site).

51. Chen Han and Wang Jianyu, "军改动态: 中共大规模调整军队文职人员体系" [Military reform: The CCP's large-scale adjustment of the PLA's civilian personnel system], *Epoch Times*, November 11, 2017, <http://www.epochtimes.com/gb/17/11/10/n9827902.htm>.

PLA's civilian specialist workforce in the coming years. From a population of 40,000 in 2017, the PLA hopes to soon employ over 200,000 civilian personnel.⁵² The new Civilian Personnel Regulations (文职人员条例) stipulate that these personnel will not wear military uniforms or hold quasi-military ranks; rather, they will enjoy the corresponding rights and obligations of government employees.⁵³ The new system both expands the range of positions open to civilian personnel and improves their compensation to better attract and retain talent, with academics and scientific researchers receiving especially preferential treatment.⁵⁴ Some special positions, including those in "difficult and remote areas" or that otherwise carry special hardships, will not even require civilian personnel to be employed full-time with the military. The new system also raises the recruitment age limit to 35 years old for junior technical positions and 45 years old for mid-career positions. In wartime, regulatory measures bring these civilian personnel into active military service as necessary.⁵⁵

Although civilian recruitment into various components of the SSF and PLA TRBs has often been achieved through ad-hoc methods, the new civilian personnel system directs recruitment through a unified portal somewhat akin to the United States'

52. Patrick Boehler, "No More Singing Generals and Dancing Majors in Chinese Military: Xi Jinping," *South China Morning Post*, August 27, 2013, <https://www.scmp.com/news/china-insider/article/1299752/no-more-singing-generals-and-dancing-majors-chinese-military-xi>.

53. "Studying and implementing Xi Jinping's thought."

54. Han and Jianyu, "Military reform."

55. "Goodbye, civilian cadres."

USA Jobs: the Military Talent Network (军队人才网).⁵⁶ In its inaugural year, the SSF is using the new system to recruit 1,037 civilian professional and technical personnel for posts in nearly 30 regions. These personnel are primarily scientific research and technology engineering talents, though the total figure also includes specialties, such as academics, medical services, and financial management.⁵⁷

Civilian cadres now have the option of converting to the new civilian personnel system or exiting the military entirely. Although the percentage of civilian cadres who will choose to continue their work under the new system is not yet known, anecdotal reports in state media note that some individual SSF units have more than 20 civilian cadres who are making the switch rather than leaving.⁵⁸ Despite the improved financial position of SSF civilian personnel, however, official media reports note compensation is still below that offered by IT firms in the Chinese private sector.

Reforms to SSF Recruitment Programs Targeting Academia

Until its dissolution in 2017, the National Defense Student or *guofangsheng* (国防生) program was one of the major avenues for SSF (and 3PLA and 4PLA) recruitment from civilian universities. The program allowed students at civilian universities to matriculate directly into the military, either by going on duty or

56. "SSF introduces policies."

57. "战略支援部队面向社会公开招考文职人员宣传公告" [Strategic Support Force makes announcement to the public on open recruitment of civil personnel], Sohu, July 16, 2018, http://www.sohu.com/a/241546660_164555.

58. Qingyun, "More than 20 members."

entering a defense technical graduate program. The National Defense Student program was one of the PLA's first major concrete steps toward the stated goal of selecting a much higher percentage of its officer corps (eventually a majority) from civilian university graduates.⁵⁹

The National Defense Student system made multiple efforts to attract and maintain high-quality recruits; these efforts included special merit scholarships for top-tier talent and preferential admission to graduate study at PLA-linked universities.⁶⁰ The program also heavily emphasized the recruitment of students at China's prestigious Project 985 and Project 211 universities, while constricting enrollment from less rigorous schools.⁶¹ Upon completion of the program and receiving their unit assignments, national defense students were assigned the same grade and rank as comparably tracked graduates of the IEU and other defense technical schools.⁶²

Ultimately, the National Defense Student program proved insufficient, and, in 2017, the PLA finally decided to discontinue it to move into a new phase of civilian talent recruitment.⁶³ The program's scholarships were not substantial enough to alter college graduates' decision making about their future; they only amounted to roughly 10,000 Chinese yuan

59. "Responses to reporter's questions."

60. "Responses to reporter's questions."

61. "Responses to reporter's questions."

62. "Responses to reporter's questions."

63. "2017年起不再从普通高中毕业生中定向招收国防生" [Starting from 2017, we will no longer recruit national defense students from ordinary high school graduates], 81.cn, May 26, 2017, http://www.81.cn/zggfs/2017-05/26/content_7620030.htm.

per person per year.⁶⁴ The program also suffered from excessive attrition, as graduating students failed to matriculate successfully into the PLA, and problems of cultural fit, as national defense students who entered directly into the military (as opposed to a defense technical graduate program) suddenly found themselves forced to adapt to military life and combat the perception that they received unearned advantages.⁶⁵

But PLA recruitment from civilian universities was never limited to national defense students. Even prior to the creation of the SSF, 3PLA actively recruited on multiple prominent technical campuses, offering civilian students outside the National Defense Student program the ability to enter the PLA as a lieutenant (中尉).⁶⁶ Public biographies of leaders of the former 3PLA and 4PLA sometimes reported their having completed degrees as civilians at technical schools prior to the creation of the National Defense Student program, demonstrating the long-standing roots of the practice.⁶⁷

Moving forward, the PLA is taking a multipronged approach to bringing human talent from academia into the SSF programmatically. In addition to the

64. "Responses to reporter's questions."

65. "國防生贖身記" [The redemption of the National Defense Student program], Initium Media, September 23, 2016, <https://theinitium.com/article/20160923-mainland-paramilistudent/>; and Ying Yu Lin, "One Step Forward, One Step Back for PLA Military Education," The Jamestown Foundation, April 24, 2018, <https://jamestown.org/program/one-step-forward-one-step-back-for-pla-military-education/>.

66. "Ministry of National Security vs. Three General Staff."

67. http://www.verydemo.com/demo_c318_i54871.html (site discontinued).

aforementioned shift from reliance on civilian cadres to a civilian personnel system that is more accessible to a range of applicants, the SSF has substantially expanded its program for directly recruiting NCOs into technical positions. In 2018, the SSF directly recruited 570 NCOs for specialized technical positions, sending them to a 13-week training course designed to acclimatize them to military life and culture.⁶⁸ The recruits came from over 100 educational institutions from across the country, with more than 40 percent of them already possessing undergraduate degrees. PLA media reporting on the shift emphasizes the importance of tackling the challenges of cultural fit and acclimation that previously bedeviled the National Defense Student program.

Trends in SSF Recruitment at Civilian Universities

Although a substantial share of billets within IEU graduate programs are reserved for personnel already in the military, the overall ratio of military to

68. Lvzhe Dong Ge, “战略支援部队570名直招士官来了” [570 Strategic Support Force direct recruits arrive], Ministry of National Defense The People’s Republic of China, August 31, 2018, http://www.mod.gov.cn/power/2018-08/31/content_4823804.htm.

nonmilitary billets has shifted dramatically over time.⁶⁹ One noteworthy trend is PLA academic institutions have instituted regulations pushing these nonmilitary recruits to enter at younger ages than their military counterparts; this appears to be a part of a broader effort to shift the demographic balance of the PLA's network warfare community in a younger direction.⁷⁰ The PLA recognizes younger personnel tend to be more technically proficient than senior officers from previous eras and developing China's information operations capability will require a less hierarchical approach to seniority than in other areas of military development. The AMS 54th RI, for example, reportedly instituted a policy years ago that 60 percent of the institute's projects be led by researchers under 35 years old.⁷¹

Beyond its generalized personnel intake practices, the PLA has developed a range of smaller, specialized programs designed to offer a tailored approach

69. “解放军信息工程大学2013年博士研究生报考须知” [Instructions for PLA IEU 2013 PhD candidates], Baidu Wenku, December 7, 2012, <http://wenku.baidu.com/view/3ea518136bd97f192279e9b0.html>; “解放军信息工程大学首招230名无军籍研究生” [PLA IEU recruits 230 nonmilitary graduate students], China Net, n.d., <http://henan.china.com.cn/news/china/201209/387504LG2A.html> (page deleted from site); and “解放军信息工程大学2013年博士研究生招生简章” [2013 PhD admissions guide for PLA IEU], Yz.chsi.com.cn, n.d., <http://yz.chsi.com.cn/sch/viewBulletin--infoId-456641647,categoryId-462794,schId-368312,mindex-12.dhtml> (page delete from site).

70. http://job.bjut.edu.cn/bjutCms/html/main/col22/2013-09/09/20130909114257218618917_1.html (site discontinued); and <http://www.bjbys.net.cn/zp/sydwzp/262183.shtml> (site discontinued).

71. http://blog.sina.com.cn/s/blog_89f0e1120102wzkc.html (page deleted from site).

to recruiting top-tier talent. The IEU has a special program for the very highest talents operated through its Graduate Student Recruitment Office (信息工程大学研究生招生办公室), which brings several dozen top research-focused undergraduates per year from a range of China's top civilian technical universities directly into the IEU's master's programs based on the recommendations of their host institutions and without requiring them to pass the relevant exams (免试硕士研究生).⁷² Applicants come exclusively from China's Project 985 and Project 211 universities; prior to the abolition of the National Defense Student program, nearly all of the selected students held that designation as well.

Similarly, top students at technically focused civilian universities may occasionally be chosen early in their college career to serve in technical reconnaissance units for a brief two-year compulsory service (义务兵役) commitment; afterwards, they return to campus and resume their academic coursework.⁷³ From 2011 onward, those participating have received incentives such as tuition reimbursement, student loan repayment assistance, and subsidized tuition after returning to campus in exchange for the disruption of their studies, according to the Ministry of Education's Provisional Policy on Tuition Assistance, National Student Loan Repayment, and Subsidies for College

72. PLA SSF IEU, n.d., <http://zhaosheng.plaieu.edu.cn/a/yanjiaoshengzhaosheng/2014/0320/292.html> (page deleted from site).

73. http://job.bjut.edu.cn/bjutCms/html/main/col22/2013-09/09/20130909114257218618917_1.html (site discontinued); and http://job.bjut.edu.cn/bjutCms/html/main/col18/2013-09/09/20130909113424031666273_1.html (site discontinued).

Students Who Enter the Army for Compulsory Military Service (应征入伍服义务兵役高等学校在校生学费补偿国家助学贷款代偿及退役复学后学费资助暂行办法).⁷⁴

Senior researchers and leaders of military RIs inside and outside of the SSF and focused on network warfare interface directly with upcoming civilian talent by serving part-time as PhD advisers within information security, network engineering, and computer science departments at top civilian technical universities. To give one example, Guo Shize, a prominent senior researcher at the AMS 54th RI, has served in the past as a PhD adviser at the University of Science and Technology of China, Beijing University of Posts and Telecommunications, and Wuhan University.⁷⁵ These postings appear to serve both as a knowledge-sharing mechanism and as a means of spotting prime talent for PLA tasking and recruitment.

Another part of the PLA's strategy for recruiting talented information operations personnel involves competitions designed to recognize students with exceptional abilities. Since 2008, PLA military academies have partnered with key civilian universities to organize specialized competitions for outstanding information security talent, with the stated goal of aiding PLA recruitment. One of the

74. “2012年高校毕业生应征入伍预征工作启动” [2012 graduates entering into preenlistment work], Renren Network, n.d., <http://page.renren.com/601256018/note/842575659> (site discontinued).

75. “众多文艺界领导专家助阵中外首工美术馆” [Leading experts in literary and art circles helped Chinese and foreign art museums], News.163, March 28, 2011, <http://web.archive.org/web/20190512143624/http://news.163.com/11/0328/16/708FDCEF00014AEE.html>.

most prominent and long-running examples is the National College Student Information Security Contest (全国大学生信息安全比赛), which is led jointly by military and civilian centers of excellence for network attack and defense research, such as the NUDT, Sichuan University, PLA Naval University of Engineering, the IEU, the University of Electronic Science and Technology of China, and the Beijing University of Posts and Telecommunications.⁷⁶ In both its defensive focus and emphasis on talent discovery, the contest is comparable to the US National Collegiate Cyber Defense Competition.

Involvement of IT and Information Security Companies in PLA Network Operations

The SSF, like its predecessors 3PLA and 4PLA, is known to have established procedures in place for contracting out research work to civilian entities, including companies in the IT and information security sectors. But China's emphasis in recent years on MCF appears to have strongly shifted institutional momentum toward deeper integration, increasing the funding and scope of cooperation opportunities available to private-sector companies.

Although the minutiae of these procedures are not publicly available, the resulting projects are often publicly visible. Outside of the SSF, information warfare research organizations such as the AMS 54th RI have contracted out industry commissioned projects (企事业单位委托项目 or 企事业单位委托项目) to civilian companies and universities with the appropriate

76. 全国大学生信息安全竞赛 [National College Student Information Security Contest (home page)], n.d., <http://www.ciscn.cn>.

research and development capacity. The scope of these commissioned projects explicitly includes research into network attack and defense technologies and may serve as an important vehicle for using civilian human capital in the service of network weapon creation.

A variety of civilian corporations and individuals participate in PLA network weapon development, whether by selling knowledge of exploits or developing tools for the PLA's use through these channels. But this collaboration has not always been straightforward. In the past, some top white-hat Chinese information security researchers have expressed that they saw significant disincentives to their firms taking on military projects. By 2012, one of the world's leading information security exploit brokers noted the price the Chinese government was willing to pay external actors for zero-days and other exploits had fallen to unusual lows, owing to both the sheer quantity of the military's internal research into network attack and exploitation vectors and the high number of private Chinese researchers selling (or giving, under threat of prosecution) their findings exclusively to the PLA defense and intelligence apparatus.⁷⁷

Private-sector firms also found themselves at a disadvantage in competing for PLA work against research programs at civilian universities and the RIs of state-owned defense conglomerates, such as China Electronics Technology Group Corporation's 54th RI (中国电子科技集团公司第五十四研究所).⁷⁸ Whereas a civilian university may have many defense research projects ongoing simultaneously, a civilian company

77. <http://jpkca.nuist.edu.cn/jsjkxzy/xsyj.html> (site discontinued).

78. <http://www.qlweekly.com/News/hot/201404/059327.html> (site discontinued)

with no prior dealings with the PLA may see the high fixed costs of compliance with PLA technical standards and procurement practices, as well as the potential for damage to the company's reputation in international markets, as strong factors weighing against entering into a relationship with the military. But reforms to the PLA's procurement and contracting system carried out under MCF policies appear to have been designed to ameliorate these concerns. In addition to research and development cooperation, SSF NSD units with network attack missions have historically contracted with outside IT companies for personnel training.⁷⁹ Outside IT and information security companies also frequently cultivate in-house information warfare militia units, which appear designed for defensive roles aimed at improving China's critical infrastructure resiliency in the event of war or crisis.⁸⁰

Although rumors abound within the Chinese information security community dating back to the Jiang Zemin era of patriotic hackers such as the Green Army collaborating with the PLA's network warfare units, such arrangements appear to be relics of the

79. Andy Greenberg, "Shopping for Zero-Days: A Price List for Hackers' Secret Software Exploits," *Forbes*, March 23, 2012, <http://www.forbes.com/sites/andygreenberg/2012/03/23/shopping-for-zero-days-an-price-list-for-hackers-secret-software-exploits/>.

80. "于明" [Yu Ming], Dalian University of Technology, n.d., <http://web.archive.org/web/20140608093313/http://gs1.dlut.edu.cn/Supervisor/Front/dsxx/new/Default.aspx?WebPageName=yuming>; and Mark Stokes et al., *The Chinese People's Liberation Army Signals Intelligence and Cyber Reconnaissance Infrastructure* (Arlington, VA: Project 2049 Institute, November 11, 2011).

past, at least at the level of official policy.⁸¹ The more talented and professional among the early generations of Chinese hackers have gone on to found professional information security consultancies and software development studios (with the Green Army, for example, transforming into the prominent information security firm NSFOCUS). These companies can and do contract with the PLA, but the PLA's formal human talent pipeline for information operations is now mature and robust enough that the SSF has little need for informal and unreliable irregulars.

Involvement of Civilian Universities in Network Warfare Research and Development Programs

The PLA has a long history of contracting with civilian science and technology universities for both information warfare research projects and training for their technical reconnaissance personnel. These arrangements can be lucrative for the schools involved; one university describes the “external resources” it receives from its relationships with PLA TRBs as a significant contribution to its budget that helps finance the school's growth plans.⁸²

When defense projects are entrusted to civilian universities, a distinction is made between vertical national defense work projects (纵向国防军工项目), which involve direct tasking to a civilian university

81. “《解放日报》关于《青鸟培养软件蓝领》的报道” [Report in PLA daily on “Blue Bird” blue-team training software], Itbenet, August 5, 2010, http://web.archive.org/web/20110604073522/http://www.itbenet.com/news_view.asp?id=51.

82. Rob Sheldon and Joe McReynolds, “China's Cyber Militia System,” in *China and Cybersecurity: Espionage, Strategy, and Politics in the Digital Domain*, ed. Jon Lindsay et al. (Oxford, UK: Oxford University Press, 2015).

handed down from the Central Military Commission, a military service or branch, a defense conglomerate, or a government ministry, and horizontal national defense work projects (横向国防军工项目), which involve a university assisting a military institution with autonomous, self-directed research and development; delegations of subprojects from institutions that have been directly tasked with a parent project; and projects at military institutions that have been delegated out to the civilian sphere (军转民项目).⁸³ Whether a project is horizontal or vertical can influence how the project is managed and the manner in which civil-military collaboration takes place.

Although procedures vary slightly from school to school, each civilian school generally has a National Security and Military Scientific Project Management Office (国防军工科研项目管理办公室 or 军工办) that handles project management functions and applications to receive military projects and liaisons between civilian and military experts and scholars.⁸⁴ Work is carried out in each school's National Defense Research and Production Base (国防军工科研生产基地) or similar facilities that possess appropriate access controls and the ability to store classified information. In theory, at least, these work premises are supposed to be sequestered from the school's normal facilities, with no project work taking place outside of them.

83. Shannon Van Sant, "China's Freelance Hackers: For Love of Country (and Proof That Propaganda Works)," CBS News, July 15, 2013, <http://www.cbsnews.com/news/chinas-freelance-hackers-for-love-of-country-and-proof-that-propaganda-works-57592999/>.

84. Stokes et al., *The Chinese People's Liberation Army*; and "湘潭大学信息工程学院" [The College of Information Engineering of Xiangtan University], n.d., <https://www.xtu.edu.cn/>.

But guidelines for universities' defense research work emphasize knowledge transfer in addition to strict adherence to project requirements, with military and civilian researchers being exhorted to organize both official and irregular technical seminars and workshops in the "open spirit of scientific research" and reject a "stove-piped, conservative and closed" approach.⁸⁵

This work is considered highly secretive, with all personnel involved required to strictly abide by the provisional regulations on Management of Classified Personnel in the National Defense Science and Technology Industry (国防科技工业涉密人员管理暂行规定) issued in 2007.⁸⁶ The use of the term "classified personnel" in this context suggests civilian researchers likely have to undergo some form of security clearance investigation. Rumors suggest these cleared researchers at civilian technical schools are also sometimes tasked with reviewing the fruits of Chinese cyber-enabled industrial espionage, providing subject matter expertise on the value of the stolen information and helping it be directed efficiently within the Chinese science and technology ecosystem.

CONCLUSION

Over the past decade, the PLA has built up a robust human talent ecosystem in support of its network operations programs with the support of

85. "南京信息工程大学军工科研项目管理办法" [Administrative measures for military scientific research projects of Nanjing University of Information Science and Technology], Kjc.nuist.edu.cn, April 15, 2009, <https://kjc.nuist.edu.cn/info/1041/2786.htm>.

86. "Military scientific research projects."

senior PLA and political leaders. This ecosystem integrates talent from a wide variety of sources and no longer appears to rely on single points of failure. Although this shift is partially a reflection of the less capital- and infrastructure-intensive nature of network weapon development when compared to the creation of fighter aircraft or missile warheads, it is nevertheless a considerable feat in the context of the PLA's ongoing struggles to modernize its defense RD&A systems and defense industries. At present the system is undergoing unprecedented evolution, with nearly every center of gravity in the PLA's information operations human capital system undergoing dramatic reform and restructuring.

Nevertheless, additional challenges remain. Retention of the PLA's network warfare workforce is still a major challenge as opportunities for skilled technology professionals in China's private sector continue to appear more attractive than those offered by the military. Although the PLA is developing new avenues for leveraging private-sector talent in network weapon development, the massive scale of the SSF's information warfare programs requires a more controlled and regularized workforce that can only be properly maintained in-house.

Personnel turnover is not always uniformly negative; older cadres may make room for members of China's younger generation of digital natives, bringing with them modern technical skill sets and innovative approaches. As the PLA's information warfare apparatus has become more regularized and its members' levels of professionalism and talent have increased, however, losses due to low retention become increasingly costly wastes of the PLA's training and educational investment. Beyond their

technical talents, PLA officers involved in network warfare development possess important institutional memory that will be crucial to maintain during this period of transition. Whether the PLA's bold new initiatives will enable the organization to successfully grapple with these challenges over the coming years remains to be seen.

LOOKING BACK . . . LOOKING AHEAD

10. ELLIS JOFFE AND THE FOUNDING GENERATION OF PLA STUDIES: THOUGHTS FOR YOUNGER SCHOLARS

Cynthia A. Watson

China scholars are extraordinarily lucky to have had true intellectual giants open the field of People's Liberation Army (PLA) and China studies: James Lilley, Ellis Joffe, Doak Barnett, Paul H. B. Godwin, Allen Whiting, and Michel Oksenberg, to name a handful. These individuals struggled with a period when China played second fiddle to Soviet concerns. China scholars owe these individuals a profound debt, particularly as the community is losing them to history at a rapid pace. The opportunities to study on the ground were limited for a considerable period. McCarthyism tied to the question of "Who lost China?" hampered scholars' careers and research opportunities. Some of these researchers could not believe as recently as the 1970s that the annual PLA studies conference cohosted by the US Army War College and the National Bureau of Asian Research would be bursting at the seams with eager, young, inquiring minds for the analytical ranks. The marvels of the Internet and the explosion of interest of late, leading to a panoply of younger scholars parlaying their superb language skills into research and spending considerable time on the ground with PLA officers, has been a new development over the past 20 years. The work of the first generation, undertaken in far different conditions, reminds China scholars of the power of intellectual determination and sheer commitment to study born of grit.

Ellis Joffe played a special role in the founding of the PLA studies community as one of those present at “the creation,” literally and figuratively. He did not live in the United States, but in Israel, where concerns were not those of McCarthyism but of survival. The Joffe family moved to Shanghai after the Russian Revolution—as many other Jews did when their welcome disappeared elsewhere—so Joffe grew up in a household worried about survival. This coincided with the PLA trying to outlast the Nationalists seeking to eradicate it. Living in China during this period provided Joffe with a deep knowledge of China’s culture, modern history, and language, each essential to his analytical approach to China and scholarship in general. The author notes this cultural benefit because so many scholars proudly taut their Mandarin credentials yet lack the knowledge of Chinese culture infusing Joffe’s analyses. Joffe also played a role in the founding of the National Bureau of Asian Research PLA conference series in 1990, participating in the majority of the gatherings until his health failed late in the first decade of this century.

A founder of early Israeli scholarship at Hebrew University of Jerusalem, Joffe was central to the study of civil-military relations in that closed Chinese regime. Writing at a time few scholars, particularly in the United States, concentrated their work on the connections between the Maoist Communist Party and the weak PLA, he took on this task over several decades to determine the nature of the tensions and the implications for China’s future.¹ His work was

1. See Ellis Joffe, *Party and Army: Professionalism and Political Control in the Chinese Officer Corps, 1949–1964* (Cambridge, MA: Harvard University Press, 1965); and Ellis Joffe, *The Chinese Army after Mao* (Cambridge, MA: Harvard University Press, 1987).

Careful, detailed, and central to that generation's appreciation of the evolving Chinese state. Some of his more interesting work concentrated on the period after Mao Zedong's death, when China's new path, as a result of the Four Modernizations, held many questions for analysts.² Joffe's work appeared widely in international journals and publications, such as his 1987 *The Chinese Army after Mao*, published by Harvard University Press.³ Although reviewers did not always concur with his analyses, their respect for the value of his work was virtually universal.

Joffe was an extraordinarily perceptive analyst of Chinese intentions and the ways in which China intended to use the PLA to achieve its goals. Joffe's concluding essay "Shaping China's Next Generation of Military Leaders: For What Kind of Army?" in the 2007 conference volume *The "People" in the PLA: Recruitment, Training, and Education in China's Military* raised points about the PLA's evolution which sound somewhat the same today, such as the effects the ongoing reforms would have on the PLA.⁴ Additionally, Joffe wondered whether the PLA would have a greater role in global aspirations (power projection) or concerns closer to home. Written as Chen Sui-bian's second, tumultuous term in Taiwan concluded, Joffe underestimated, as did many

2. Ellis Joffe, "Party-Army Relations in China: Retrospect and Prospect," *China Quarterly* 146 (June 1996): 299-314.

3. Joffe, *Chinese Army after Mao*.

4. Ellis Joffe, "Shaping China's Next Generation of Military Leaders: For What Kind of Army?" in *The "People" in the PLA: Recruitment, Training, and Education in China's Military*, ed. Roy Kamphausen, Andrew Scobell, and Travis Tanner (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2008), 353-88.

scholars and politicians, the probability of increased tensions over Taiwan. He may have underestimated because he did not factor in the increased mainland anxieties at a time when concerns over Taiwan were seemingly subsiding, or because he fell prey to the geographic imperative that seemed powerful (to this analyst, at least) as the relationship progressed. Certainly the frustration Beijing expressed repeatedly between 2000 and 2006 as Chen's tenure developed along paths the mainland found frightening led Joffe to recognize China was developing a PLA with the primary objective of thwarting any declaration of de jure independence.

China in 2007, as Joffe wrote, was definitely behind the United States in military capability, although the modernization that began after the 1995-96 Taiwan Strait crises was well underway, as Bernard Cole's and Dennis Blasko's analyses and conference papers from this and other scholarly convocations indicated.⁵ Studies more recently have shown the growing emphases on not merely acquiring newer platforms, such as submarines, but in elevating the quality of leadership, organization, and administration. Much of this change appears to mirror reforms taken in the United States years ago, but they are decided changes from what was once an armed force primarily reliant on numbers of men under arms. Joffe considered these factors as part of the fabric of the PLA's culture and the interplay between it and the Communist Party of China (CPC).

5. Bernard D. Cole, *The Great Wall at Sea: China's Navy Enters the Twenty-First Century* (Annapolis, MD: US Naval Institute Press, 2001); and Dennis J. Blasko, *The Chinese Army Today: Tradition and Transformation for the 21st Century* (London: Routledge, 2006).

Joffe's essay appeared as the PLA still felt stung by its inability to project a Chinese humanitarian assistance and disaster relief role in regional rescue efforts following the disastrous 2004 Indonesian tsunami. Simultaneously, much of the world began refocusing on shifting balances of world power, which was embodied by PLA behavior in the East and South China Seas.

"Refocusing" emphasizes embracing a more comprehensive approach to analyzing the PLA, rather than counting numbers of aircraft or men and women under arms. This emphasis dramatically reinforces Joffe's point that China's determination of military rightsizing springs from determining the interests it seeks to defend, as one would expect from a discussion on achieving a rightsized military. Many of the military analyses of the People's Republic of China today arguably consider only the hard numbers of increased Chinese hardware—particularly ships—rather than the across-the-board assessment of increased capabilities and responsibilities and overall military reforms within the PLA. Although the number of ships and aircraft increased and their sophistication improved over the past decade, the national interests China seeks to defend around the world also have increased substantially. As the United States learns daily, those global requirements create opportunities and challenges which the PLA will confront, regardless of its size. Joffe's reminder to consider all of these factors is an important one too many discussions seem to ignore today, particularly with the breathy headlines typical of much analysis in the news.

Additionally, Joffe's assessment of relative capabilities between the United States and China

predated the jarring reality of the 2008 natural disasters (winter snows in January and the massive earthquake in May), which illustrated the PLA's lack of strategic lift and logistics capability either to secure the homeland or respond to humanitarian assistance and disaster relief for the Chinese people. The PLA leadership had to confront this challenge as China sought to increase its global role as a modern power while also trying to respond to domestic crises.

A considerable portion of Joffe's essay considered China as a great power, with an understanding of the PLA as an avenue for realizing that great-power status. In particular, he opined that the PLA would be extremely unlikely to achieve some of its deepest aspirations "for generations," but that has proven a surprisingly—and for some disturbingly—underestimation of China's transformative powers for its armed forces.⁶ Although many press articles and analyses note China's advancement in military capabilities across the board over the past 20 years, careful listening also provides acknowledgment by many interlocutors that China is still quite a long way from achieving the great-power capability it believes

6. Joffe, "Shaping China's Next Generation," 363.

the PLA needs.⁷ As noted below, PLA leadership recognizes that as China has progressed, the steps have been frustrating at times because the challenges of advancing technology may not coincide with the country's ambitions. Joffe would easily recognize the importance of a PLA expanding its navy and air force, reworking its Rocket Force, and crafting a support staff, yet facing massive pushback from the largest branch, the ground forces, which experienced the same bureaucratic budget fights all militaries do around the world. Meanwhile, the CPC is increasingly asking China's military to support the party's global ambitions as a great player.

Joffe accurately anticipated China's aggressive moves to build armed forces commensurate with those of a great power. PLA activities in the past generation indicate China is the most important permanent member of the Asian security landscape, calling into question how important the United States' role is in comparison; at the least, it is no longer as militarily untouchable as it was a decade ago. Joffe anticipated this shift in his analyses and encouraged China

7. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018* (Washington, DC: Department of Defense, May 16, 2018); Bill Gertz, "China Rapidly Building Advanced Arms for Use against US," *Washington Free Beacon*, May 11, 2018, <https://freebeacon.com/national-security/china-rapidly-building-advanced-arms-use-u-s/>; Dennis J. Blasko, "China's Military Spending: A ChinaFile Conversation," *ChinaFile*, March 6, 2018, <http://www.chinafile.com/conversation/chinas-military-spending/>; and Michael D. Swaine, "The PLA Navy's Strategic Transformation to the 'Far Seas': How Far, How Threatening, and What's to Be Done?," in *Going Global? The People's Navy in a Time of Strategic Transformation* (Newport, RI: China Maritime Studies Institute, 2019).

scholars over the years to recognize this likelihood while remembering the CPC's intention to keep the PLA under its control, rather than as a military focused entirely on capability regardless of CPC control. The CPC does not believe the source of China's power is the PLA; rather, the PLA is—as Joffe would remind China scholars—a manifestation of the CPC's ability to raise China from the depths of a century-and-a-half of humiliation. The CPC intends to keep the military at its disposal to retain China's hard-earned return to status. This professionally competent but ideologically subservient body may have grown since Joffe's passing in 2010, but its core role in Chinese society has not changed.

Much ink over the past 10 years has raised questions about PLA desires to thwart US naval activity in protection of Taiwan and expand China's ability to dominate in maritime disputes in the East and South China Seas. China has engaged in anti-access/area denial activities in the South China Sea, where Beijing literally built islands on coral and rock formations and low-tide elevation areas. These transformations on and beneath the surface of the sea accompanied the more aggressive actions of a newly expanded PLA Navy, which sought to prevent the stifling of China's increasing maritime activities along its long coastline, as well as in littoral and extra-regional waters. The new PLA Navy has a greater number of highly capable surface vessels and submarines in its fleet. This increase in Chinese maritime power, accompanied by coast guard and other maritime assets, has resulted in a celebration of enhanced Chinese power and status at the same time the US Navy, traditionally seen as dominant in those waters, is being stretched by continuing global requirements.

Similar PLA Navy activities have occurred in the East China Sea, where maritime disputes with Japan over rock formations in the Senkaku Islands illustrate pride and prowess more intense than has been seen for the past 100 years or more. The activities of the PLA Navy in these waters, along with efforts in 2010 to interfere with US intelligence ships off the Chinese coast, show a professional military confidence that had been lacking, but is now on display as part of the post-2008 China, one proud of both its Olympics and its economic power.

One major change in PLA dynamics Joffe did not directly address was China's perception, so vocally argued a decade ago, that the United States sought to "keep China down." The growing nationalism was supported by a stronger PLA with greater capability after the sustained increases in the defense budget resulting from a stronger overall Chinese economy. Although they are well beyond the focus of this chapter, PLA responses to reconnaissance flights over the South China Sea, for example, invariably invoke the cry that the US Navy is infringing on China's sovereignty. Although many US analysts reject this assessment on the grounds China has no right to occupy and control either the land features or the air space in that part of the ocean, Beijing's response consistently reflects a profound sense of injustice. Although the CPC may use this sense of injustice to bludgeon foreigners, the increasing sense over the past decade among PLA officers has been that the primary US goal in the region is to deny them the pride of national transformation, forcing instead an implied continuation of the humiliation so hated in China.

Certainly, the PLA's capabilities have improved substantially and progressively since Joffe wrote

the 2007 piece, but the long-term frustration has not evaporated as the United States continues as the PLA's *bête noire* in PLA eyes. Joffe might well have pondered the events that would have to occur for the PLA to change its opinion that the US policy toward China is one of containment.

Joffe's analyses of the PLA were always mindful of the reality that it is as much a force for the CPC to govern as a defensive force for the Chinese nation. As such, he might not have specifically identified a number of the transformative changes over the past decade, but they would not have surprised him. He most likely would have urged China scholars to recognize that the context of relations between the CPC and PLA called for such steps as part of the former's retention of control over the latter.

In particular, the PLA reforms of the past three years have been in keeping with the demand reiterated by Xi Jinping that the gun serve the CPC. The PLA reforms, a clear shift toward US-style management of the armed forces as part of the greater emphasis on a modern, information-based military, continue the willingness of the Chinese government to pursue steps directly or indirectly mimicking US actions over the past half-century. The PLA reforms, moving from military regions to theaters and recasting the administrative approach of leadership, do not precisely mirror the reforms of the US military in 1947, 1958, or 1986, but they illustrate the importance of redirecting the levels of administration into an organization more able to carry out war when confronted with that requirement. PLA reforms also coincide with the widely proclaimed anti-corruption campaign of Fifth-Generation General Secretary Xi Jinping as a method of reconsolidating the

CPC's central role as the arbitrator of Chinese society, including the PLA.

The corruption investigations targeting PLA senior leadership over the past five years further indicate the continuing determination by CPC elders to exert power over the armed forces. Joffe's work reminds China scholars that this exertion of power dates to the founding of the CPC in the 1920s. The dual approach Xi initiated with the anti-corruption monitoring and a substantial modernization under the 2015 PLA reforms unequivocally returned power over the military to the hands of the CPC, quashing rogue or even revisionist elements in the PLA itself, a trend Joffe would have anticipated. His work reminds China scholars of the PLA's political nature, both past and present.

The cyber and space domains in their PLA dimensions offer a new twist to Joffe's interpretations as traditional PLA power has moved into new arenas. His analyses of the PLA extending the CPC's predominant role in Chinese society did not emphasize cyber or space domains, both of which are now considerably more important than in his time. The PLA role in this transformation of the force is consistent with prior Chinese activities, however, which have attempted to leapfrog generations of development to put China on par with outsiders, usually the United States. Cyber developments over the past decade have particularly brought the need to blend newer technology with traditional forms of state control over information; these are seen both as a threat to Chinese interests as well as a new tool for the PLA (and state). As James Mulvenon has frequently noted,

these changes also present possible threats to China.⁸ Although Joffe certainly heard many scholars ponder the possible openings cyber presented the PLA in exploiting the vulnerabilities of others, he understood those same tools invariably pose challenges to China.

Finally, Joffe's approach was a gentle reminder that China, with the CPC in control, is an important player in the international system and will use its military to protect the governing regime's hold on power. Perhaps because he lived in a society daily confronting serious existential challenges, his analysis of the PLA, the CPC, and China itself was matter-of-fact. His assessments did not try to sell an ideological position; rather, they considered the implications of data.

Joffe saw the need to study the PLA because it was a valuable tool with which the Chinese leadership could achieve its goals, but that did not mean it was the ultimate threat in the world. That narrow distinction, often lost of late in the flurry of stories about rising PLA capabilities, may miss the reality which he so often brought China scholars back to: in using the PLA in the current context, China confronts challenges as well as opportunities. Joffe might well have asked Western leaders, had they attended these conferences, whether the benefits of various interactions with China led to outcomes consistent with the levels of anxiety so often associated with our current assessments of the PLA. Rephrased as a question, are the risks of a rising PLA resulting from enhanced overall Chinese power more important than the resulting benefits of intercourse with China?

8. Dr. James C. Mulvenon, interview by the author, March 2017.

In short, Joffe anticipated many aspects of the current bilateral military-to-military relationship, yet underestimated the power of some trends. His profound knowledge of China's culture, however, gave him a superb understanding of the dynamics that predominantly did come to pass. Today's younger scholars would be well served to recall these deep cultural and historic feelings of China as the new generation of analysts ponder the knowledge they need to conduct accurate analyses.

One of the most central concepts in Judaism, Joffe would remind China scholars, is that of *l'dor vador*, words repeated on Yom Kippur to remind Jews of the importance of passing down knowledge from one generation to another. By reconsidering the exquisite analytical role Joffe played in this field, the National Bureau of Asian Research and the US Army War College are indeed passing this knowledge from one generation to another. Ellis Joffe would offer us China scholars a broad smile in return.

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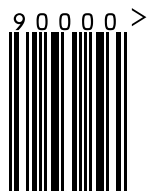
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