

A MODERN MAJOR GENERAL

Building Joint Commanders in the PLA

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Among the key ingredients in fielding a modern joint military force is cultivating a cadre of high-caliber commanders and staff officers to plan and lead operations. This has been a perennial challenge for all modern militaries, as the scope and scale of warfare has extended past single battle campaigns of short duration. Since the end of World War II, for instance, the U.S. military has considered and reconsidered ways in which officers can be given the requisite training, experience, and education to work effectively across Service boundaries and within joint organizations such as the combatant commands and Joint Staff. The Goldwater-Nichols Department of Defense Reorganization Act of 1986 mandated joint professional military education and joint assignments as requirements for promotion, yet the creation of a deeply rooted joint culture remains elusive—if achievable at all.¹

For decades, China's People's Liberation Army (PLA) has also struggled with producing the officers it needs to perform joint operations. Reforms carried out during the 1990s and 2000s attempted to reorient the PLA toward a stronger joint operational capability, but weaknesses in the human resource domain persisted. Key problems included senior and mid-

level officers with limited exposure to other services, few opportunities for non-ground force officers to get joint assignments, and training that paid lip service to joint operations via superficial involvement of other services to allow portraying service exercises as “joint.” Yet the need for qualified personnel has only increased as the PLA, under Xi Jinping, has been tasked with being able to fight and win “informationized local wars,” which are inherently joint.² Xi and his fellow reformers in the PLA understand the problem and have adopted several initiatives designed to alleviate it, but the effectiveness of those reforms remains unclear.

This chapter documents how the PLA has tried to cultivate joint commanders before and during the current reform cycle, and comments on obstacles limiting the chances for success. It is divided into five sections. The first discusses the motivation for human capital reforms under Xi. The next reviews reforms instituted during the preceding two administrations. This is followed by a discussion of identified weaknesses as well as solutions considered in PLA sources prior to the Xi era. The fourth assesses reforms undertaken since 2016 to build qualified joint commanders in three areas: professional military education (PME), personnel management, and training. The conclusion assesses possible obstacles to current reforms and states the implications for the PLA.

Impetus for Reform

An overarching operational objective of the current PLA reform cycle is to create the conditions for better planning and execution of joint operations.³ This focus on joint operations mirrors changes in PLA doctrine over the preceding 30 years that required commanders to integrate the unique combat capabilities of the individual services (army, navy, air force, and Rocket Force), along with combat support units in areas ranging from logistics to space-based surveillance, in order to conduct complex operational missions. The current doctrinal rubric is known as informationized local wars [*xinxihua jubu zhanzheng*, 信息化局部战争], which focuses on executing high-tech, integrated joint operations. Key types of campaigns include amphibious

assaults, blockades and counter-blockades, joint firepower strikes, and anti-air raid operations.⁴ Conducting these types of operations effectively would be a key to success in larger campaigns against Taiwan and other regional adversaries—and to counter U.S. military intervention in a conflict.

Reforms launched in late 2015 and early 2016 sought to improve China's joint operations capabilities in several ways. Most prominent was the creation of a two-tiered permanent joint command structure, in which the Central Military Commission (CMC), aided by a Joint Staff Department in Beijing, would oversee operations led by five theater commands (replacing the previous seven military regions), each focused on a specific set of regional contingencies. For instance, the Eastern Theater Command (TC) would be responsible for operations against Taiwan, while the Northern TC would lead operations in the Yellow Sea and on the Korean Peninsula. The commanders would have peacetime and wartime control of the ground, naval, air, and conventional missile units within their theaters.⁵ A related goal was rebalancing the services in favor of maritime and aerospace forces, which had been greatly outnumbered by the ground forces throughout the PLA's history.⁶ Joint “enablers” were consolidated in the creation of the Strategic Support Force (responsible for space, cyber, and electronic warfare) and the Joint Logistics Support Force.

Xi and his fellow reformers understood that structural changes would be of little value without corresponding human capital reforms, especially in the officer corps. The initial reform outline presented at the Third Plenum of the 18th Party Congress in November 2013 discussed the need to build “new-type operational forces” [*xinxing zuozhan lilian*, 新型作战力量], denoting highly qualified personnel with the requisite training and education to succeed in modern combat.⁷ CMC Vice Chairman Xu Qiliang noted that achieving this goal would demand changes across the PLA's human resources system, including in the areas of promotions, benefits, and career paths.⁸ The formal 5-year reform agenda unveiled on January 1, 2016, further described the need to cultivate “new-type military talent” [*xinxing junshi rencai*, 新型军事人才], requiring improvements in PME, training, and personnel management.⁹

Nevertheless, recruiting and retaining higher quality officers (as well as noncommissioned officers [NCOs]) would only be a first step. Given its operational requirements, the PLA would also need a cadre of officers with the specialized knowledge and skills required to understand, plan, and carry out joint operations. At a tour of the PLA National Defense University (NDU) in March 2016, Xi Jinping stated that the entire PLA must focus on “grooming talented personnel in commanding joint military operations, a complex and large project involving many factors.”¹⁰ Xi reiterated this message during a tour of the CMC’s new joint operations command center in April 2016, when he called on the PLA to adopt “extraordinary measures” to train joint commanders and achieve a “big breakthrough as quickly as possible.”¹¹ An accompanying *PLA Daily* report argued that without sufficient progress, “joint operations will be only a slogan, and winning battles will be impossible to achieve.”¹² These statements indicate that a second phase of the current reforms will move beyond changes to PLA organizational structure and focus on building the softer skills necessary for executing joint operations.¹³

Earlier Reforms

Xi’s call for more qualified joint commanders was more an exhortation for the PLA to complete unfinished business than a radical innovation. The PLA’s overall focus on planning and conducting joint operations did not originate with Xi, but rather began in earnest in the 1990s.¹⁴ Contributing factors included the observation that success on the modern battlefield required strong coordination between units from different services, as exhibited by the U.S. military during the 1990–1991 Gulf War, and the deterioration of cross-Strait relations, culminating in the 1995–1996 Taiwan Strait crisis, which spurred new thinking on the types of missions the PLA must be prepared to conduct to deter Taiwan independence or invade and occupy the island if necessary.¹⁵ This focus on joint operations led to a number of changes in the PME system, personnel management, and the training arena.

PME Reforms

A series of PME changes were designed to better educate officers in joint operational arts. PLA NDU [*guofang daxue*, 国防大学] was established in 1985 primarily in order to train senior officers (major generals and rear admirals) from all the services, preparing them for command positions.¹⁶ Reflecting changes in PLA doctrine, both Jiang Zemin and Hu Jintao called for that institution to produce commanders capable of leading joint operations.¹⁷ Accordingly, during the 2000s, NDU added content in that subject, such as by offering courses in “joint firepower strikes under complex electromagnetic conditions.”¹⁸ This was complemented by the publication of new teaching materials, likely derived at least in part from classified doctrinal sources. For instance, in 2012 and 2013 the PLA Academy of Military Science [*junshi kexue yuan*, 军事科学院]—the PLA’s primary center for doctrinal development—released two new teaching volumes designed to give students more exposure to joint operations concepts.¹⁹

PME reforms also affected lower level service academic institutions and military regions. In June 2007, for instance, the former General Staff Department spearheaded an effort to promote closer collaboration between NDU and the service command academies in the area of joint operations instruction.²⁰ Although the details of this program are unclear, the goal was likely to introduce joint operational concepts to officers earlier in their careers.²¹ A separate program sponsored by the Shenyang Military Region between 2004 and 2009 tried to foster stronger interservice understanding and esprit de corps by giving officers the chance to cross-enroll in PME institutes outside their home service.²² In addition, the 2010 defense white paper noted that the PLA was “laying stress on the training of officers for joint operations,” in part by publishing “basic readers” on the subject and holding lectures across all branches and services.²³

Personnel System Reforms

Earlier reforms in the personnel system sought to develop human capital on two levels. As a first step, the PLA needed to attract and retain a

high-quality, educated officer corps from which joint commanders could be developed. Post-Mao professionalization of the officer corps began during the 1980s, but took new strides in the 1990s with the recruitment of civilian college graduates. National defense scholarships were also established at civilian colleges in order to attract more highly educated and technically proficient personnel, a task complicated by growing opportunities in the civilian economy.²⁴ Service academies and command colleges increased emphasis on science and technology in their curricula.²⁵ Pay and benefits also increased as a way to retain top performers. Salaries doubled for some officers between 1999 and 2000, for instance, and perks included subsidized housing, new cars, and study opportunities.²⁶

Personnel system changes also tried, in limited ways, to enhance officers' exposure to different services and provide joint opportunities. Several military regions experimented with cross-posting officers to temporary assignments in different services during the 2000s. For instance, in 2006 a North Sea Fleet deputy chief of staff was temporarily posted as a Nanjing Military Region group army deputy commander.²⁷ During the mid-2000s, 100 officers took part in a Shenyang Military Region program involving short-term duty in a different service.²⁸ In addition, a handful of senior officers took positions in nominally joint billets, giving them broader (and likely career-enhancing) experiences.²⁹ Examples include Ma Xiaotian and Wu Shengli's assignments as deputy chief of the general staff prior to assuming command of the air force and navy, respectively, and Ma and Song Puxuan's service as NDU president.³⁰ Joint assignments for lower level non-ground force officers, however, were few and far between.

Training Reforms

Following an overall pattern of increasing complexity and realism in the training arena, PLA officers gained more experience in joint training during the 2000s and 2010s. Major joint exercises in the early 2000s in the Nanjing and Guangzhou Military Regions focused on Taiwan scenarios, while those in the Jinan Military Region focused on problems in command

and control, logistics, and other areas.³¹ Mark Cozad documents the evolution of joint training during the 11th and 12th 5-year plans (2006–2010, 2011–2015), describing a growing number of joint exercises (for instance, 18 were held in 2009 alone); a broadening range of subjects, such as war zone-level command and control, civil-military integration, and air force and naval power projection; and, especially during the latter period, increasingly realistic conditions, including operations in unfamiliar terrain and “dedicated opposition forces providing more-than-token resistance.”³²

The PLA also took steps toward greater standardization and supervision of joint training. Perhaps the most important change was the creation of the General Staff Department Military Training Department in December 2011. Compared to its predecessor organization, the new department was intended to focus on not only ground force training but also training across all the services. It reportedly included a bureau responsible specifically for joint training.³³ As part of its oversight of the PME system, the Military Training Department also sought to “cultivate talented joint operations commanding personnel” by devising new programs on joint operations at NDU, the National University of Defense Technology [*guofang keji daxue*, 国防科技大学], and service and branch academies.³⁴ In short, the PLA adopted (or at least experimented with) a variety of measures to cultivate joint commanders during the tenures of Xi’s two immediate predecessors.

Problems and Proposed Solutions

Despite these initiatives, weaknesses persisted in the development of joint commanders and staff officers. Helping to justify Xi’s focus on improvement in this area, a Xinhua report on the newly created Central Theater Command headquarters noted that most staff officers were “proficient” in the operations of their own services, but joint operations were “rather strange to them. So there exists an obvious gap in the capability of taking command of joint operations.”³⁵ A senior PLA interlocutor likewise argued in June 2016 that deficiencies in talent cultivation meant that it would be “many years” before non-ground force officers would be able to exercise command over army

operations, while army commanders had much to learn about employing air and naval assets.³⁶ Some senior PLA officers judged the effort to increase jointness by cross-service assignments to be a failure. While a cross-service assignment increased the officer's familiarity with another service, cross-posted officers served for too short a time (typically 6 to 9 months) and lacked the knowledge to be given substantive command responsibilities.³⁷

PLA sources describe several interrelated factors contributing to this situation. First are general weaknesses in leadership and technical skills. Poor command skills are reflected in recent slogans such as the "two insufficient capabilities" [*liangge nengli bugou*, 两个能力不够], referring to the inability of the PLA to fight, and cadres at all levels to command, modern wars; and the "five cannots" [*wuge buhui*, 五个不会], meaning commanders who cannot judge the situation, understand the intentions of higher echelons, make command decisions, deploy forces, and deal with exigent circumstances.³⁸ Lack of technical proficiency is also a commonly cited problem. A human resources scholar at the Xi'an Political Academy, for instance, bemoaned the fact that while the PLA has acquired "cutting-edge weapons" and equipment, it lacks personnel qualified to use many of those systems.³⁹

Second is the lack of "joint" education throughout the PME system. One concern is that officers are not receiving adequate joint operations content in the NDU course for senior commanders, which is a requisite step for high-level command billets.⁴⁰ Another problem is that, despite earlier experiments, service academies below the NDU level lack the experienced faculty and curriculum necessary to educate officers in joint operational concepts. One PLA command academy commandant lamented that his institute was lagging behind in its ability to provide joint education because it was still struggling with bringing its students (at the colonel/senior colonel grade) to an acceptable level of proficiency in *combined arms* (that is, intraservice) operations.⁴¹ Yet another issue is that command academies tend to include students only from a single service, and even then are segregated according to branch specialty, reducing the ability of officers to interact with colleagues from different services.⁴²

Third are quality assurance and credentialing problems. Generally, the PLA continues to face problems such as “weak and out of date courses,” instructors that are “out of touch with modern operational requirements,” and academic fraud and corruption.⁴³ Certification of officers well beyond their actual operational abilities has also been a longstanding problem for the PME system.⁴⁴ Exacerbating this situation is the lack of standardized criteria for the selection of joint commanders. One PLA source, for instance, contrasts the PLA with the U.S. and other Western militaries, which have “strict requirements” under which officers must demonstrate proficiency in joint operations (such as through graduation from a joint PME course or by serving in a joint assignment) in order to advance.⁴⁵

Fourth is a continuing paucity of joint operational experience among PLA personnel. One hurdle is that few active-duty PLA officers have any combat experience; those who do, such as current CMC member Li Zuo-cheng and CMC Vice Chairman Zhang Youxia, served in the 1979 border war with Vietnam and subsequent skirmishes, which did not involve extensive naval or air force operations.⁴⁶ A retired PLA flag officer identified the lack of combat experience as a significant deficiency and noted that efforts to gain experience via assignments to United Nations peacekeeping forces and exercises with foreign militaries were of limited effectiveness.⁴⁷ Although more intensive and realistic operational and joint training likely compensates somewhat for limited combat experience, PLA sources continue to suggest constraints on training quality. A report on two 2016 exercises held in the Northern Theater Command, for example, found that jointness was achieved only “in form rather than in spirit . . . on the surface, rather than in essence . . . and in might rather than in mind.”⁴⁸

Fifth is inadequate career incentives for officers to aspire to joint assignments in the first place. A useful point of comparison is the U.S. military prior to Goldwater-Nichols, in which officers were rewarded for excelling within their respective Services and appointment to joint organizations was seen as detrimental to one’s career.⁴⁹ That problem was only rectified when joint assignments (and joint PME) became congressionally

mandated requirements for promotion. A 2015 NDU volume suggests that a similar problem might be at work in the PLA, noting that most officers are not pursuing joint command or staff positions.⁵⁰ In the PLA Navy, for instance, key criteria affecting career prospects included experience at sea, overseas experience, education level, participation in party affairs, and personal connections—but not experience in joint positions.⁵¹ The incentives problem was exacerbated by the lack of opportunities for joint assignments.

Sixth is that the PLA is a relative latecomer in efforts to cultivate qualified joint command personnel. One source notes that the PLA did not begin focusing on joint operations until after the Gulf War, years after the U.S. military began to emphasize joint warfare.⁵² Another source similarly notes that both Russia and the United States began the process of training joint commanders in the mid-20th century and argues that both countries assessed that it would take 25 years to develop a cadre of fully qualified joint commanders. Implicit in this critique is the notion that building a joint culture, in which officers look beyond their own service's parochial interests, perspectives, and traditions, can appreciate different service viewpoints, and can work effectively across service lines, is a generational process. If U.S. experience is a guide, the goal of genuine joint consciousness might never be fully attainable. Yet the author concludes that China “does not have 25 years and must adopt extraordinary measures” to catch up.⁵³

Given these problems, Chinese analysts have considered various proposals on how to improve human capital for joint operations. One set of recommendations centers on strengthening joint operations instruction across the PME system. Echoing initiatives sponsored in the mid-2000s, one study notes that training for joint commanders cannot be accomplished “all at once,” but needs to be pursued at different stages in an officer's career.⁵⁴ Pursuing a “multitiered” joint PME system, in which instruction would begin as early as the major level, would also bring China into conformity with the U.S., British, German, and other advanced militaries.⁵⁵ Other suggestions include curriculum reforms, increasing

study abroad opportunities, better integrating PME institutes with joint exercises, and creating more online courses to facilitate distance learning.⁵⁶

Another proposal concerned changes to the personnel management system. A 2008 internal-circulation volume published by NDU envisioned a “joint specialization” (similar to a U.S. military occupational specialty) in which a select group of junior officers would be designated as future joint commanders and be provided with relevant experience and education at different career point. For instance, between the 15- to 20-year mark in their careers, ground force officers would be assigned to joint positions as staff officers, then receive intermediate-level combined arms education, then take a unit command position within a group army, and then receive more advanced joint staff officer instruction. This would culminate with appointment as a joint commander at the 35- to 40-year mark. Another study argued that promotion criteria for joint commanders needed to be clarified and standardized.⁵⁷

Other suggestions focused on the need for practical experience. The 2013 *Science of Military Strategy* broadly argues for deepening joint training and completing a more effective joint training management system.⁵⁸ A 2016 PLA NDU volume noted that “war is the best crucible for forging command talent” but identified several areas in which commanders might attain useful experience short of actual conflict, including joint exercises, use of computer simulations, combined exercises with advanced foreign militaries, and participation in military operations other than war, such as humanitarian assistance and disaster relief, search and rescue, and escort duty. Without such real-world expertise, the authors feared that many PLA joint commanders would be little more than “armchair strategists” [*zhishang tanbing*, 纸上谈兵].⁵⁹

Xi-Era Reforms

PLA human capital reforms after 2015 resulted from three factors: the practical imperative to build the requisite talent to plan and lead joint operations, the foundation provided by previous attempts to adjust the

PLA's human resources systems to achieve that goal, and assessments of why the PLA faced continuing weaknesses in this arena. Even prior to the structural changes announced in late 2015 and early 2016, the need to adopt corresponding human capital changes was likely weighed by Xi and the CMC leading small group on reform, which was established in January 2014 to lead the process and consider policy adjustments. As CMC Vice Chairman Xu Qiliang remarked, the reforms would be a "complex systems engineering project," in which the major elements had to be considered in parallel, even if they were announced sequentially.⁶⁰ By late 2017, the PLA had begun to unveil changes to the PME, personnel, and training systems.

PME Reforms

During his March 2016 visit to the PLA NDU, Xi set the tone for revamping the PME system to better educate aspiring joint commanders, calling for new teaching concepts, updated course content, improved teaching models, and a stronger faculty.⁶¹ That guidance led to several changes. First, the NDU senior commanders' course was restructured so that the students, who had previously been grouped together, were divided into joint operational command and leadership management tracks. The first group focused on joint operations, including through case study analysis and briefings on "key issues" facing each of the theater commands. The second group, destined for senior-level staff posts (such as in service headquarters and CMC departments), placed more emphasis on administrative issues.⁶² This change was accompanied by an updated syllabus, including six new courses in joint operations. According to one PLA NDU professor, 80 to 90 percent of the course content was new.⁶³

Second, PME institutes directly under the CMC expanded their course offerings in joint operations. For instance, PLA NDU created a 10-month course to expose lower level officers to joint operations. Launched in the 2017–2018 academic year, the program was focused on officers at the battalion to deputy regiment leader levels (majors through colonels), and included staff officers working in each of the TC headquarters.⁶⁴ According to PLA

media, completion of the program would eventually be a precondition for certain theater command billets—a goal that, if implemented, may help to resolve problems of standardized credentialing.⁶⁵ This change coincided with the announcement that, as part of a larger realignment of the PME system, the PLA NDU would oversee a new joint operations college, which apparently succeeded the Shijiazhuang Army Command College (though few details on that new organization were immediately available).⁶⁶ The National University of Defense Technology likewise unveiled new courses on joint operations intelligence support for TC staff officers.⁶⁷

Third, lower level service PME institutes placed a new emphasis on joint operations. One report noted that the PLA Rocket Force Command College had signed a cooperative agreement with five other service command colleges that would allow cross-training of students, broader research cooperation, and “sharing of talent resources.”⁶⁸ That college also introduced new rules stating that more than 60 percent of its Ph.D. students would be required to complete dissertations focused on joint operations.⁶⁹ A PLA service command college commandant also noted that his institute had increased focus on joint operations, pointing out a system in which student groups would have the opportunity to spend a month at each of the other service command colleges.⁷⁰

Fourth, stronger partnerships were established among PME institutes, theater commands, and the services. Although faculty from the PLA NDU and other institutes previously had opportunities to lecture and observe training in the military regions, PLA media suggested that those relationships had deepened after the reforms. For instance, a report from the Western Theater Command noted that in 2016, professors from 10 different academies had given lectures or conducted seminars on joint operational command, while volumes published by NDU were being used to train headquarters staff.⁷¹ Another report noted that a single lecture by an NDU professor drew more than 1,900 officers from the Southern Theater Command headquarters and service component commands.⁷² Moreover, PLA NDU announced that it would invite commanders and staff officers from

the theater commands to give lectures to its students in Beijing, bringing insights from the field to the classroom.⁷³

Personnel System Reforms

Building on previous reforms, changes were also made within the personnel system to develop stronger joint commanders. One area involved attempts to incentivize high performers. A program in the Eastern Theater Command, for instance, matched performance in joint operations study and training with incentives including promotions, priority in selecting future billets, and other “awards.”⁷⁴ Likewise, the Southern Theater Command stated that it would grant awards, citations, and promotions to officers who had achieved satisfactory results on tests measuring aptitude in joint operational command skills.⁷⁵ The impending shift to a system based on ranks, rather than grades, may also have the effect of incentivizing joint commanders. According to one NDU professor, higher ranks would be reserved for personnel who “directly participate in operations,” rather than noncombat positions.⁷⁶ If the PLA does replace the senior colonel rank with a flag-level brigadier general rank, some PLA sources have suggested that this rank may be reserved for operational commanders and that senior colonels in support roles might be demoted.⁷⁷

The reforms also expanded opportunities for non-ground force officers to serve in joint positions, especially within the theater commands. Key examples include the appointment of a naval officer (Yuan Yubai) and an air force officer (Yi Xiaoguang) as commanders of the Southern and Central Theater Commands, respectively. Those appointments reflect the recognition that naval and air force experience is valuable, and even preferable, in those theaters with heavy maritime and air defense responsibilities. Changes also occurred at the theater deputy commander level, in which the proportion of non-army officers rose from less than one-third to more than one-half post-reform.⁷⁸ Opportunities for naval, air force, Rocket Force, and Strategic Support Force personnel at lower levels are less clear, though reports suggest that joint operations command centers are staffed with personnel from every service.⁷⁹

However, more ambitious changes to the personnel system were still being debated in late 2017. PLA interlocutors have described proposals to create a rotational system in which officers are able (and required) to move among theater command headquarters, operational units, and CMC departments.⁸⁰ Some evidence that these proposals were making their way into practice was seen in 2017 with the rotation of 100 Beijing-based officers to western provinces and the reshuffling of group army commanders (though part of the rationale for the latter development was likely breaking up patronage networks).⁸¹ Establishment of a rotational system for officers would represent a significant departure from the current system, in which officers spend most of their careers within a single theater. Although it would provide future joint commanders with a broader range of experience, rotational assignments would likely be an unwelcome change for those officers who benefit from residing in more affluent regions, where their families have access to better housing, education, and health care—and who choose to remain in the PLA because of those circumstances. These practical considerations are a significant obstacle to a more radical transformation of the assignment system.

Broader changes to the personnel system could also result in a more streamlined and competent officer corps. For instance, changes to the promotion system may encourage greater transparency and competition among qualified officers. One early indication was a competition held in the Western Theater Command in late 2017, in which 2 officers were selected from a pool of 14 applicants to fill open brigade commander positions. The candidates were screened through a standard assessment gauging their knowledge and command skills.⁸² A separate, but perhaps related, proposal that has been discussed in recent years has been to “civilianize” more of the PLA workforce, especially noncombat positions currently filled by officers. This would build on previous PLA efforts to contract out some nonessential tasks as part of civil-military integration. Discussions with PLA officers indicate that the previous civilian cadre [*wenzhi ganbu*, 文职干部] system is being eliminated and that some military positions will become civilian contract positions as part of efforts to meet force reduction targets. However, some officers are

reluctant to move from the active force to civilian positions due to lower pensions and reduced benefits.⁸³

Training Reforms

A final set of reforms aimed to improve the quality of PLA joint training. Structurally, the former General Staff Department Military Training Department was replaced with a separate Training and Administration Department under direct CMC supervision.⁸⁴ That department exercises its authority by both establishing training standards and conducting inspections of training events across the PLA, including “theater command–level joint training,” to ensure that standards are being met.⁸⁵ Inspections completed in early 2017, for instance, uncovered violations by 57 units and 99 personnel from all of the services and meted out a variety of punishments.⁸⁶ The department has also been involved in setting the content of PME reforms, including reducing the number of doctoral students in military academies and redirecting their focus to “practical” subjects, such as joint operations.⁸⁷

Table. Theater Command Training for Joint Commanders and Staff	
Theater Command (TC)	Example Initiatives/Exercises
Eastern TC	Command post exercise involving more than 100 joint operations commanders.
Southern TC	Training class for joint commanders involving lectures from NDU scholars.
Central TC	Command post exercise focused on handling an “unidentified air object.”
Northern TC	Training courses for headquarters staff involving case study analysis, lectures from theater commanders, and external speakers.
Western TC	Embedding headquarters staff in field exercises carried out by frontline units.

Sources: Dai Feng and Cheng Yongliang [代烽, 程永亮], “Upgrading Capabilities, Strengthening Skills in Joint Operations and Joint Training” [能力升级, 练强联战联训过硬本领], *PLA Daily* [解放军报], September 1, 2016, available at <http://www.81.cn/jfbmap/content/2016-09/01/content_155319.htm>; Li Huamin and Jiang Boxi [李华敏, 姜博西], “Speed Up Training for Joint Operations Command Talent” [加快联合指挥人才培养], *PLA Daily* [解放军报], August 15, 2016, available at <www.81.cn/jfbmap/content/2016-08/15/content_153536.htm>; Yang Danpu and Yang Qinggang [杨丹谱, 杨清刚], “Joint Forum’ Focuses on Real Combat Capabilities” [‘联合大讲堂’ 聚焦实战长本事], *PLA Daily* [解放军报], April 16, 2016, available at <http://www.81.cn/jfbmap/content/2016-04/16/content_141747.htm>; Du Shanguo and Shi Liu [杜善国, 石榴], “With This Type of Training, We Will Have Confidence in Future Battles” [这样练下去, 将来打起仗来心里就有底了], *China Youth Daily* [中国青年报], April 12, 2017, available at <http://news.xinhuanet.com/mil/2017-04/12/c_129529922.htm>.

Training reforms have also been conducted at the TC level. A key focus has been on providing officers with practical training related to joint operations. Likely intended in part to demonstrate compliance with directives from Xi and the PLA top brass, each of the theater commands have announced relevant on-the-job training programs. Captured in the table, these ranged from command post exercises, to lectures, to participation in unit-level exercises. A Central TC program, for instance, focused on six capabilities junior officers would need to run the theater's joint operations command center, including drafting documents, marking maps, performing calculations, performing data searches, providing support to decisionmakers, and using the data link command system.⁸⁸ A December 2017 competition of 100 staff officers in the Central TC tested skills ranging from relaying orders to assessing adversary threats.⁸⁹ Based on a similar training program, the Eastern Theater Command required personnel to pass a "joint duty qualification test" that evaluated officers' understanding of the weapons, equipment, and operational principles of different services.⁹⁰

Some changes have also started to appear in joint field training. While a comparison of pre- and post-reform joint exercises is beyond the scope of this chapter, it is worth noting that the shift from military regions to theater commands may be instrumental in spurring more intensive joint training. Speaking during an air-ground exercise, a Southern TC air force officer explained that his service often previously paid only lip service to joint training, given weak authorities of the military regions over non-army units. Under the new system, theater air forces are more responsive to training requirements being set by TC headquarters.⁹¹ Theater joint training has also allowed non-army officers to gain experience in commanding ground forces. For instance, in October 2016, the East Sea Fleet staged an amphibious drill in which the activities of army, naval, and air force units were directed by a maritime joint command center.⁹² The latest iteration of the CMC's authoritative training guidance, promulgated in January 2018, also emphasizes joint operations as a focus of training across the PLA.⁹³

Conclusion and Implications

The first phase of the reforms announced in late 2015 and early 2016 involved major changes to the organizational structure of the PLA. These included disbanding the four general departments and transferring most of their functions into departments within a revised CMC structure; restructuring the seven military regions into five joint theater commands aligned against specific regional threats; and removing the operational command role of the service headquarters and giving them (including a new PLA Army service headquarters) an “organize, train, and equip” mission. These shifts were followed by an October 2017 restructuring of the membership of the CMC, which eliminated ex officio representation for the service chiefs and the heads of the CMC Joint Logistics Department and Joint Armaments Department.⁹⁴ These structural reforms collectively constitute a major shift in where power and responsibilities lie within different parts of the PLA, which is why they were resisted by vested interests (especially the ground forces) for more than a decade. Nevertheless, these “above the neck” reforms did not affect the organization of most PLA operational units and had only a limited impact on average PLA officers, NCOs, and enlisted personnel. For most PLA ground force and air force units, the “below the neck” reforms to move to a group army-brigade-battalion structure were likely more significant.

However, reforms to address the “software” and human capital problems discussed in this chapter have the potential to be much more disruptive for the daily lives of the PLA officer corps. (The reduction of 300,000 personnel—declared to be “basically complete” in March 2018—has also been extremely disruptive for the military.) Building a “modern major general” capable of commanding integrated joint operations will likely involve significant changes to PLA recruitment and retention policies; to the military educational system (at the academy level and throughout the service and joint PME system); to the rank/grade, assignment, and promotion systems; and to the conduct and evaluation of joint exercises. Put another way, these reforms could change who joins the PLA, criteria for promotion and

advancement, what a successful career looks like, and what quality of life is available for a successful officer and his or her family. They could also have a negative impact on the careers of current officers, who were recruited, promoted, and assigned using a different set of criteria and incentives.

PLA writings and statements by Xi Jinping and PLA leaders suggest that the PLA is aware of a number of deficiencies in its current recruitment, educational, personnel management, and training practices that inhibit the development of effective joint commanders. Moreover, a wide range of solutions are being discussed, some of which would involve significant reforms to longstanding PLA regulations and practices. Some of the reforms, such as increasing the joint content of PME courses and increasing interactions between the field and schoolhouse, are underway and will be relatively easy to implement. Others, such as reforming the grade/rank, assignment, and promotion systems, will be much more disruptive to the military as a whole and to the career prospects of the current officer corps. The degree of difficulty is likely to be even higher because changes in one area affect many of the other areas.

Making major changes in a military typically requires making major changes in the incentives that ambitious military officers face as they try to win promotion and advance to senior leadership positions. But changing the incentives and promotion criteria also entails changes in who decides which officers will get promoted, and this will undermine existing power and patronage networks within the PLA. For example, increasing the joint content of PME courses is relatively easy, but making these courses more rigorous and having the results of classroom evaluations and performance on tests influence promotion decisions take autonomy away from the local commanders and political commissars who currently determine promotions. These officers (who have succeeded under the old criteria) are likely to argue that proven operational command ability and political reliability should outweigh classroom performance.⁹⁵ The current system where officers spend most of their careers within one service and one theater up to corps leader grade means that winning the approval of one's local

commanders and political commissars is critical for success. But rotational assignments to a different service or outside the theater will loosen these bonds; the “new guy” will always be at a disadvantage compared to officers who have known and worked for the commander and political commissar for a decade or more. The U.S. military seeks to avoid these problems by having centralized promotion boards within each Service, which reduces (but does not eliminate) the role of patronage in promotions. The PLA could potentially adopt such a system, but it would constitute a major change from current practice, which is adapted to Chinese culture, Chinese Communist Party rule, and the PLA’s own organizational culture and values.

Some of the proposals being discussed suggest focusing resources and attention on a subset of junior officers who the PLA believes have the potential to be effective joint commanders. (This is already being put into practice in a limited way by the NDU distinction between “command” and “staff” tracks, although this appears to be based on career fields.) One challenge is identifying officers with high potential early enough in their careers to steer them into the right mix of joint, educational, and operational assignments to develop well-rounded commanders. The idea of a “joint specialization” is envisioned as one vehicle for achieving this goal. However, a separate career track also has the potential to be a career ghetto if the senior leaders deciding on promotions (currently local commanders and political commissars within the officer’s service) value a different set of criteria (for example, excellence in command rather than a well-rounded set of skills). Moreover, if the promotion system discriminates against effective service commanders who are *not* selected for joint specialization early in their careers, it is likely to be regarded as unfair. Some militaries have adopted joint staff or general staff systems that constitute a separate career track, but these usually involve strategy, planning, or staff functions rather than operational command of troops.⁹⁶ The PLA, like any military, will resent and resist a promotion system that does not reward and promote its most operationally proficient commanders, even if that proficiency is demonstrated primarily in single-service operations.

This suggests that the success of reforms to the recruitment, education, assignment, and promotion systems is interdependent with PLA efforts to give operational units more stringent joint training requirements and more opportunities to practice and meet those requirements in joint exercises. This would create the possibility of a virtuous cycle where company and battalion commanders understand how their units fit into joint operations (and the benefits of jointness for their ability to carry out their assigned missions) and bring that knowledge into PME courses and staff assignments in a theater service headquarters or command post. That education and experience, in turn, would make them more effective in exercising further responsibility at the brigade level and then prepare them for higher level joint positions at the theater or CMC level. However, this sort of virtuous cycle involves generational change to be fully effective. The PLA leadership faces difficult choices in deciding what changes are needed to get from here to there and how to keep faith with existing officers and NCOs while building the military of the future.

PLA leaders have concluded that cultivating “new-type military talent” is necessary to build “new-type operational forces” capable of fighting and winning the informationized wars of the future. This chapter describes some of the changes to current PLA recruitment, educational, personnel management, and training practices that will likely be necessary. Some aspects of these changes are likely to be observable as the PLA decides what to do and promulgates new regulations to implement reforms in these areas. However, it will be harder to understand precisely how these changes affect the career incentives of PLA officers and to assess their cumulative impact. Military-to-military exchanges offer a limited but valuable window on the issues the PLA is grappling with, but U.S. interlocutors should be careful not to offer the PLA answers to the problems it faces. At the same time, U.S. policymakers should expect the PLA to engage other advanced militaries, including U.S. allies, in its efforts to survey and evaluate the range of potential solutions.⁹⁷

Building a “modern major general” capable of effectively commanding integrated joint operations is a challenging task that may take the PLA

decades to achieve. The PLA assesses that its current efforts fall short of the mark and is contemplating significant changes to its recruitment, education, assignment, and promotion systems and training practices. The extent to which the PLA is willing and able to change how it does business to develop more effective joint commanders—and its ability to “fix the plane while flying it”—will be a major determinant in how successful it is in realizing the potential combat capability created by PLA investments in modernizing its weapons systems and developing joint doctrine.

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Notes

¹ On problems of joint culture, see David T. Fatua, “The Paradox of Joint Culture,” *Joint Force Quarterly* 26 (Autumn 2000), 81–86. Nevertheless, creating a common joint culture remains an aspiration. For instance, the U.S. *Joint Officer Handbook* encourages officers to “foster a joint culture that is not mutually exclusive of any one Service culture, but instead advocates all Service cultures and leverages the best aspect of each.” *Joint Officer Handbook* (Washington, DC: The Joint Staff, August 2012), 70.

² For a discussion, see M. Taylor Fravel, “China’s New Military Strategy: ‘Winning Informationized Local Wars,’” *China Brief* 15, no. 13 (July 2, 2015), available at <<https://jamestown.org/program/chinas-new-military-strategy-winning-informationized-local-wars/>>.

³ Joel Wuthnow and Phillip C. Saunders, *Chinese Military Reforms in the Age of Xi Jinping: Drivers, Challenges, and Implications*, China Strategic Perspectives 10 (Washington, DC: NDU Press, 2017), 23–32, available at <inss.ndu.edu/Portals/68/Documents/stratperspective/china/ChinaPerspectives-10.pdf>.

⁴ Joel Wuthnow, “A Brave New World for Chinese Joint Operations,” *Journal of Strategic Studies* 40, nos. 1–2 (2017), 174–179. These campaigns are described at length in Dang Chongmin and Zhang Yu [党崇民, 张羽], *Science of Joint Campaigns* [联合作战学] (Beijing: People’s Liberation Army Press [中国人民解放军出版社], 2009); Zhang Yuliang [张玉良], *Science of Campaigns* [战役学] (Beijing: National Defense University Press [国防大学出版社], 2006), 273–326. For an earlier discussion, see Jianxiang Bi, “Joint Operations: Developing a New Paradigm,” in *China’s*

Revolution in Doctrinal Affairs, ed. James C. Mulvenon and David M. Finkelstein (Arlington, VA: CNA, 2002), 29–78.

⁵ In practice, this control would be exercised through service component commands and operational command posts in each theater. The precise mechanisms that theater commanders use to exercise operational control over conventional rocket force units in their theaters remain unclear. See Wuthnow and Saunders, *Chinese Military Reforms in the Age of Xi Jinping*, 24–28.

⁶ Prior to the reforms, the People’s Liberation Army (PLA) ground forces held around 69 percent of all PLA end strength, while the navy, air force, and Rocket Force account for around 10 percent, 17 percent, and 4 percent, respectively. Wuthnow and Saunders, *Chinese Military Reforms in the Age of Xi Jinping*, 29. As of writing, it was unclear whether the size of the navy and air force will increase in absolute terms or merely in relation to the ground forces.

⁷ “Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform,” Xinhua, November 12, 2013, available at <www.china.org.cn/china/third_plenary_session/2014-01/16/content_31212602.htm>.

⁸ Xu Qiliang [许其亮], “Firmly Push Forward Reform of National Defense and Armed Forces” [坚定不移推进国防和军队改革], *People’s Daily* [人民日报], November 21, 2013, 6.

⁹ “CMC Opinions on Deepening National Defense and Military Reforms” [中央军委关于深化国防和军队改革的意见], Xinhua [新华], January 1, 2016, available at <http://news.xinhuanet.com/mil/2016-01/01/c_1117646695.htm>.

¹⁰ Li Xuanling and Wang Yitao [李宣良, 王逸涛], “Xi Jinping: To Achieve the China Dream and the Strong Army Dream, Supply Human Talent and Knowledge Support” [习近平: 为实现中国梦强军梦提供人才和智力支持], Xinhua [新华], March 23, 2016, available at <http://news.xinhuanet.com/politics/2016-03/23/c_1118422270.htm>.

¹¹ Wang Wenyue [王文跃], “‘The Most Difficult Battle Preparations’ Cannot Be Slowed” [“最艰巨的战争准备”慢不得], *PLA Daily* [解放军报], May 6, 2016, available at <www.81.cn/jfjbmap/content/2016-05/06/content_143686.htm>.

¹² Ibid.

¹³ For an overview of the PLA reform agenda through 2020, see Wuthnow and Saunders, *Chinese Military Reforms in the Age of Xi Jinping*, 49–52.

¹⁴ The PLA traces its experience with joint operations to the 1955 battle of Yijiangshan, in which air force, ground, and naval units coordinated to land on and

occupy Nationalist-held islands off the Chinese coast. However, preparations for joint operations were limited during most of the Cold War due to a preoccupation with preparing for People's War, centering on ground force operations.

¹⁵ Wuthnow, "A Brave New World for Chinese Joint Operations." For a discussion of Chinese lessons from the Gulf War, see Dean Cheng, "Chinese Lessons from the Gulf War," in *Chinese Lessons from Other Peoples' Wars*, ed. Andrew Scobell, David Lai, and Roy Kamphausen (Carlisle, PA: Strategic Studies Institute, 2011), 161–162.

¹⁶ Its first president, Zhang Zhen, actively investigated how foreign militaries pursued "joint professional military education" (PME), for instance asking detailed questions during visits to the U.S. National Defense University (NDU). See Paul H.B. Godwin, "The Cradle of Generals: Strategists, Commanders, and the PLA–National Defense University," in *The "People" in the PLA: Recruitment, Training, and Education in China's Military*, ed. Roy Kamphausen, Andrew Scobell, and Travis Tanner (Carlisle Barracks, PA: Strategic Studies Institute, 2008), 322.

¹⁷ Jia Yong [贾永] et al., "Record of Jiang Zemin's Concern for the PLA National Defense University Training New-Type Military Talent" [江泽民关心国防大学培养新型军事人才纪实], Xinhua [新华], December 4, 2002, available at <www.people.com.cn/GB/shizheng/16/20021204/881361.html>; "Record of Hu Jintao's Attendance at the PLA National Defense University's 80th Anniversary Celebration" [胡锦涛主席出席国防大学80周年校庆活动纪实], Xinhua [新华], December 7, 2007, available at <http://news.ifeng.com/mainland/200712/1207_17_324697.shtml>.

¹⁸ Nan Li, "Educating 'New-Type Military Talent': The PLA's Command Colleges," in *The "People" in the PLA*, 300–301.

¹⁹ These volumes were Tan Yadong [谭亚东], ed., *Joint Operations Course Materials* (Beijing: Academy of Military Sciences Press [军事科学院出版社], 2013); and Li Yousheng and Wang Youhua [李友生, 王永华], *Lectures on the Science of Joint Campaigns* (Beijing: Military Science Press [军事科学出版社], 2012). See the chapter by Cozad in this volume. Of note, the PLA NDU also tried to foster greater critical thinking among its students through greater use of seminar discussions, case studies, and wargaming. How much these techniques were used in the study of joint operations, however, is unclear. See Li, "Educating 'New-Type Military Talent,'" 301.

²⁰ Godwin, "The Cradle of Generals," 332.

²¹ Typically, PLA officers only began study of joint operations upon attendance at the PLA NDU's senior command course for major generals and rear admirals.

²² Between 2004 and 2009, 200 officers in the Shenyang Military Region participated in cross-college training, while 100 officers served in a different service.

See Kevin McCauley, *PLA System of System Operations: Enabling Joint Operations* (Washington, DC: The Jamestown Foundation, 2017), 42.

²³ “China’s National Defense in 2010,” Information Office of the State Council, March 31, 2011, available at <www.china.org.cn/government/whitepaper/node_7114675.htm>.

²⁴ Thomas J. Bickford, “Searching for a Twenty-First-Century Officer Corps,” in *Civil-Military Relations in Today’s China: Swimming in a New Sea*, ed. David M. Finkelstein and Kristen A. Gunness (New York: Routledge, 2007), 176–177. See also Kristen A. Gunness, “Educating the Officer Corps: The Chinese People’s Liberation Army and Its Interactions with Civilian Academic Institutions,” in *Civil-Military Relations in Today’s China*, 187–201.

²⁵ Author’s visit to Army Command College and Air Force Command College, 2005.

²⁶ Bickford, “Searching for a Twenty-First-Century Officer Corps,” 180.

²⁷ Elizabeth Hague, “PLA Career Progressions and Policies,” in *The “People” in the PLA*, 274.

²⁸ McCauley, *PLA System of Systems Operations*, 42.

²⁹ However, it is worth noting that the PLA did not have a formal joint assignment system, such as exists in the U.S. military.

³⁰ Kenneth W. Allen, “Assessing the PLA Air Force’s Ten Pillars,” *China Brief* 11, no. 3 (February 11, 2011), 5–9, available at <<https://jamestown.org/program/assessing-the-pla-air-forces-ten-pillars/>>.

³¹ McCauley, *PLA System of Systems Operations*, 43. See also Wanda Ayuso and Lonnie Henley, “Aspiring to Jointness: PLA Training, Exercises, and Doctrine, 2008–2012,” in *Assessing the People’s Liberation Army in the Hu Jintao Era*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle Barracks, PA: Strategic Studies Institute, 2014), 171–206.

³² Cozad, “Toward a More Joint, Combat Ready PLA?” 12.

³³ Mark Stokes and Ian Easton, “The Chinese People’s Liberation Army General Staff Department: Evolving Organization and Missions,” in *The PLA as Organization v2.0*, ed. Kevin Pollpeter and Kenneth W. Allen (Vienna, VA: Defense Group, Inc., 2015), 156–157.

³⁴ Cozad, “Toward a More Joint, Combat Ready PLA?” 18.

³⁵ Mei Shixiong and Zhao Guotao [梅世雄, 赵国涛], “PLA Central Theater Command Starts Its Work by Energetically Enhancing Joint Operations Command Capabilities” [中部战区起步开局大力提升联合作战指挥能力],

Xinhua [新华], April 1, 2016, available at <http://news.xinhuanet.com/mil/2016-04/01/c_128857500.htm>. The article also cites the case of Jiang Guo, a staff officer at Central Theater Command headquarters, who despite his experience within a group army, “feels that he still lacks the capability of using forces of other services while being transferred to work in the joint command framework after the founding of the theater command.”

³⁶ Interview, June 2016.

³⁷ Interview, June 2016 and November 2017.

³⁸ See Li Chunli [李春立], “Make Efforts to Break Through the ‘Two Insufficient Capabilities,’” [着力破解“两个能力不够”问题], *PLA Daily* [解放军报], December 30, 2014, available at <<http://theory.people.com.cn/n/2014/1230/c40531-26302150.html>>; Yu Qifeng [于启峰], “Start from the Source in Breaking Through the ‘Five Cannots’” [破解“五个不会”难题要从源头入手], *PLA Daily* [解放军报], October 13, 2015, available at <www.81.cn/jfjbmap/content/2015-10/13/content_125880.htm>; Wang, “‘The Most Difficult Battle Preparations’ Cannot Be Slowed.” See also Dennis J. Blasko, “Walk, Don’t Run: Chinese Military Reforms in 2017,” *War on the Rocks*, January 9, 2017, available at <<https://warontherocks.com/2017/01/walk-dont-run-chinese-military-reforms-in-2017/>>.

³⁹ Blasko, “Walk, Don’t Run.”

⁴⁰ Li Dianren [李殿仁] et al., *Study on the Development of Joint Commanding Officers* [联合作战指挥人才培养] (Beijing: National Defense University Press [国防大学出版社], 2008), 35.

⁴¹ Interview with PLA Command Academy commandant, April 2016. For a discussion on limited “joint PME” within the PLA Navy, see Kenneth W. Allen and Morgan Clemens, *The Recruitment, Education, and Training of PLA Navy Personnel* (Newport, RI: U.S. Naval War College, 2014), 26.

⁴² Kenneth W. Allen, “Chinese Air Force Officer Recruitment, Education, and Training,” *China Brief* 11, no. 22 (November 30, 2011), 9–13, available at <<https://jamestown.org/program/chinese-air-force-officer-recruitment-education-and-training/>>. It is worth noting that this situation stands in contrast to the U.S. PME system, in which officers are able to attend war colleges outside their home Service (for example, naval officers attending the Army War College).

⁴³ McCauley, *PLA System of Systems Operations*, 42.

⁴⁴ Bickford, “Searing for a Twenty-First-Century Officer Corps,” 321.

⁴⁵ Li et al., *Study on the Development of Joint Commanding Officers*, 38. Based on requirements contained in the Goldwater-Nichols Department of Defense

Reorganization Act of 1986, credentialing for U.S. joint officers is written into Title 10 of the *U.S. Code*. See 10 *U.S. Code* § 661—Management Policies for Joint Qualified Officers, available at <www.law.cornell.edu/uscode/text/10/661>.

⁴⁶ On the 1979 Sino-Vietnam border war, see Harlan W. Jencks, “China’s ‘Punitive’ War on Vietnam: A Military Assessment,” *Asian Survey* 19, no. 8 (August 1979), 801–815; Xiaoming Zhang, “China’s 1979 War with Vietnam: A Reassessment,” *The China Quarterly*, no. 184, (December 2005), 870–871.

⁴⁷ Interview with retired PLA flag officer, November 2017.

⁴⁸ Du Shanguo and Shi Liu [杜善国, 石榴], “With This Type of Training, We Will Have Confidence in Future Battles” [这样练下去, 将来打起仗来心里就有底了], *China Youth Daily* [中国青年报], April 12, 2017, available at <http://news.xinhuanet.com/mil/2017-04/12/c_129529922.htm>. For a similar diagnosis of joint training weaknesses in the former Nanjing Military Region, see Cai Yingting and Zheng Weiping [蔡英挺, 郑卫平], “Deeply Absorb Historical Experience from the War of Resistance to Make Preparations for Military Struggle More Solid and Effective” [深刻汲取抗战胜利历史经验把军事斗争准备抓得更加扎实有效], *People’s Daily* [人民日报], July 3, 2015, available at <<http://politics.people.com.cn/n/2015/0703/c1001-27249242.html>>.

⁴⁹ One U.S. author notes that “in the Navy in the mid-1980s, joint duty was considered the ‘kiss of death’; it meant that one’s career was over.” See James R. Locher III, “Has It Worked? The Goldwater-Nichols Reorganization Act,” *Naval War College Review* 54, no. 4 (Autumn 2001), 104.

⁵⁰ Fang Jiangzhe, *View on the Armed Forces Education and Training System* [军队院校培训体制] (Beijing: National Defense University Press [国防大学出版社], July 2015), 281.

⁵¹ Jeffrey Becker, David Liebenberg, and Peter Mackenzie, *Behind the Periscope: Leadership in China’s Navy* (Arlington, VA: CNA, 2013), 107–22. One exception was that service as a deputy chief of the general staff became a normal avenue for appointment as PLA Navy commander.

⁵² Li et al., *Study on the Development of Joint Commanding Officers*, 14. Key moments on the U.S. path toward creating a joint force included the Defense Reorganization Act of 1958, which focused on unified command and control; the 1982 promulgation of the AirLand Battle doctrine by the U.S. Army; and the Goldwater-Nichols Act, which strengthened the authority of the regional combatant commands.

⁵³ Wang, “‘The Most Difficult Battle Preparations’ Cannot Be Slowed.” U.S. National War College Professor Cynthia Watson has a more pessimistic assessment

of the PLA's chances to bridge this gap, arguing that the "PLA cannot hope to achieve in a few short years what has taken the United States decades, and it will need many more years of practice and experimentation to absorb the changes and derive the benefits of a more Western-style PME." Bickford, "Trends in Education and Training, 1924–2007," in *The "People" in the PLA*, 41.

⁵⁴ Li et al., *Study on the Development of Joint Commanding Officers*, 45.

⁵⁵ *Ibid.*, 35.

⁵⁶ McCauley, *PLA System of Systems Operations*, 41.

⁵⁷ Liu Wei [刘伟], ed., *Theater Joint Operations Command* [战区联合作战指挥] (Beijing: National Defense University Press [国防大学出版社], 2016), 315.

⁵⁸ *Science of Military Strategy* [战略学] (Beijing: Academy of Military Science Press [军事科学院出版社], 2013), 203–204.

⁵⁹ Liu, *Theater Joint Operations Command*, 311–315.

⁶⁰ Xu, "Firmly Push Forward Reform of National Defense and the Armed Forces," 6.

⁶¹ Li and Wang, "Xi Jinping: To Achieve the China Dream and the Strong Army Dream, Supply Human Talent and Knowledge Support."

⁶² Chu Zhenjiang and Luo Jinmu [褚振江, 罗金沐], "Innovating Joint Operations Command Talent, Professionalizing Training Models" [创新联合作战指挥人才专业化培养模式], *PLA Daily* [解放军报], March 20, 2016, available at <www.81.cn/jfjbmap/content/2016-03/20/content_138222.htm>.

⁶³ "PLA National Defense University Trains Fine Commanders for Joint Operations," CCTV-7, March 21, 2016.

⁶⁴ Huang Panyue, ed., "PLA Aims to Cultivate Commanding Talents for Joint Operations," *China Military Online*, September 7, 2017, available at <http://eng.chinamil.com.cn/view/2017-09/07/content_7747234.htm>.

⁶⁵ *Ibid.*

⁶⁶ "PLA NDU Joint Operations College Established, Major General Zhou Licun Selected as Political Commissar" [国防大学联合作战学院已组建, 周立存少将担任学院政委], *The Paper* [澎湃新闻], August 9, 2017, available at <www.thepaper.cn/newsDetail_forward_1757313>.

⁶⁷ Guo Hongyu and Chen Zhen [果翊宇, 陈震], "Focusing on Tomorrow's Battlefields and Forging Intelligence Crack Troops" [聚焦明日战场砥砺知敌尖兵], *PLA Daily* [解放军报], April 3, 2018, available at <www.81.cn/jfjbmap/content/2018-04/03/content_203092.htm>.

⁶⁸ Zhang He and Hu Xiaoqing [张贺, 胡小青], “Command College Seeks to Cultivate Teachers’ Joint Operations Instruction Capabilities” [指挥学院着力培养教员联合作战教学能力], *Huojianbing Bao* [火箭兵报], June 4, 2016, 2.

⁶⁹ Ibid.

⁷⁰ However, it was not entirely clear if this was a new initiative. Interview with PLA service command college commandant, June 2016.

⁷¹ Yang Xiaobo and Ji Dongsheng [杨晓波, 冀东昇], “Talent Capable of Planning and Studying Operations Swiftly Rising” [谋战研战人才方阵加速崛起], *PLA Daily* [解放军报], November 30, 2016, available at <www.81.cn/jfjbmap/content/2016-11/30/content_162918.htm>.

⁷² Li Huamin and Jiang Boxi [李华敏, 姜博西], “Speed Up Training for Joint Operations Command Talent” [加快联合指挥人才培养], *PLA Daily* [解放军报], August 15, 2016, available at <www.81.cn/jfjbmap/content/2016-08/15/content_153536.htm>. See also Mei and Zhao, “PLA Central Theater Command Starts Its Work By Energetically Enhancing Joint Operations Command Capabilities”; Dai Feng and Cheng Yongliang [代烽, 程永亮], “Upgrading Capabilities, Strengthening Skills in Joint Operations and Joint Training” [能力升级, 练强联战联训过硬本领], *PLA Daily* [解放军报], September 1, 2016, available at <www.81.cn/jfjbmap/content/2016-09/01/content_155319.htm>.

⁷³ Zhang Shibo and Liu Yazhou [张仕波, 刘亚洲], “Strive to Build the Highest Military Academy with the World’s Advanced Standards and Chinese Characteristics” [努力建设具有世界先进水平和中国特色的最高军事学府], *PLA Daily* [解放军报], April 18, 2016, available at <www.mod.gov.cn/education/2016-04/18/content_4649689_2.htm>.

⁷⁴ Dai and Cheng, “Upgrading Capabilities, Strengthening Skills in Joint Operations and Joint Training.”

⁷⁵ Li and Jiang, “Speed Up Training for Joint Operations Command Talent.”

⁷⁶ Lu Xiaolin [卢晓琳], “Military Officer System Reform, Take Off!” [军官制度改革, 走起!], *People’s Daily Online* [人民网], January 8, 2017, available at <http://paper.people.com.cn/rmrb/html/2017-01/08/nw.D110000renmrb_20170108_1-06.htm>. For a discussion of ranks vs. grades, see Kenneth W. Allen, “China Announces Reform of Military Ranks,” *China Brief* 17, no. 2 (January 30, 2017), 7–13, available at <<https://jamestown.org/program/china-announces-reform-military-ranks/>>.

⁷⁷ Interviews with PLA sources, December 2016 and November 2017.

⁷⁸ Wuthnow and Saunders, *Chinese Military Reform in the Age of Xi Jinping*, 18–19.

⁷⁹ Ibid., 28.

⁸⁰ Interviews with PLA interlocutors, 2016–2017.

⁸¹ Author interviews, December 2017.

⁸² “Choosing People through Combat! Western Theater Command Fills 2 Brigade Commander Positions through Military Competition of 14 Officers” [以战选人! 西部战区14名军干比武竞争两个旅长岗位], *PLA Daily* [解放军报], December 11, 2017, available at <http://news.ifeng.com/a/20171211/54045910_0.shtml>.

⁸³ Interviews, 2016–2017. PLA interviewees indicate that civilian contract positions will not count against the PLA’s post-reduction 2 million end-strength.

⁸⁴ Wuthnow and Saunders, *Chinese Military Reform in the Age of Xi Jinping*, 31.

⁸⁵ Ouyang, ed., “CMC Intensifies Supervision Over Military Training,” *China Military Online*, March 21, 2017, available at <http://english.chinamil.com.cn/view/2017-03/21/content_7534230.htm>.

⁸⁶ *Ibid.* Punishments included “self-examinations,” publicized criticisms, and “discipline punishments.”

⁸⁷ Zhang Tao, “Chinese Military Academies to Cut Student Enrollment,” *Xinhua*, October 23, 2017, available at <http://english.chinamil.com.cn/view/2017-10/23/content_7797090.htm>.

⁸⁸ Mei and Zhao, “PLA Central Theater Command Starts Its Work by Energetically Enhancing Joint Operations Command Capabilities.”

⁸⁹ Zhang Kunping [张坤平], “100 Joint Campaign Staff in Martial Competition on the Same Stage” [百名联合战役参谋同台比武竞技], *PLA Daily* [解放军报], available at <www.81.cn/jfjbmap/content/2017-12/16/content_194521.htm>.

⁹⁰ Cheng Yongliang [程永亮], “Whether One May Command Joint Operations Requires ‘Certification’” [能不能指挥联合作战, 需要“考证”了], *China Youth Daily* [中国青年报], February 23, 2017, available at <<http://news.sina.com.cn/o/2017-02-23/doc-ifyavwcv8556596.shtml>>.

⁹¹ Ouyang Zhimin, Ma Fei, Xiao Chiyu [欧阳治民, 马飞, 肖驰宇], “Joint Training Is a ‘Chemical Reaction’” [联合训练是一场“化学反应”], *PLA Daily* [解放军报], February 3, 2017, available at <www.mod.gov.cn/power/2017-02/03/content_4771337_3.htm>.

⁹² Liu Zhongtao and Zhou Pengcheng [刘中涛, 周鹏程], “Three Services Share Information on the Maritime Battlefield” [海上战场, 三军信息互联互通], *PLA Daily* [解放军报], October 13, 2016, available at <www.81.cn/jfjbmap/content/2016-10/13/content_158800.htm>.

⁹³ “PLA Publishes New Military Training Outline, Highlights Combat,” Xinhua, January 27, 2018, available at <www.xinhuanet.com/english/2018-01/27/c_136929690.htm>.

⁹⁴ See Phillip C. Saunders, “Alternative Models for the Central Military Commission,” *China Brief* 17, no. 13 (October 20, 2017), available at <<https://jamestown.org/program/alternative-models-central-military-commission/>>; Joel Wuthnow and Phillip C. Saunders, “China’s Military Has a Discipline Problem. Here Is How Xi Jinping Is Trying to Fix It,” *The National Interest*, November 12, 2017, available at <<http://nationalinterest.org/feature/chinas-military-has-discipline-problem-here-how-xi-jinping-23163>>.

⁹⁵ Alternatively, if test scores and grades are given greater weight in promotion decisions, it would produce incentives for cheating and corruption of the military education system.

⁹⁶ The United States implemented a joint staff structure as part of the Goldwater-Nichols reforms, though some have argued for a more comprehensive general staff model involving a permanent cadre of professional Joint Staff officers. See, for example, Jim Thomas, *Statement Before the Senate Armed Services Committee on Defense Reform*, Senate Armed Services Committee, November 10, 2015, available at <www.armed-services.senate.gov/imo/media/doc/Thomas_11-10-15.pdf>.

⁹⁷ For an overview of these efforts, see Kenneth W. Allen, Phillip C. Saunders, and John Chen, *Chinese Military Diplomacy, 2003–2016: Trends and Implications*, China Strategic Perspectives 11 (Washington, DC: NDU Press, July 2017), available at <ndupress.ndu.edu/Portals/68/Documents/stratperspective/china/ChinaPerspectives-11.pdf>.