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ARTICLE



Intellectual officers, professional journals, and military change in the Northeast and National Revolutionary Armies, 1928–1937

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ABSTRACT

This article discusses the ways in which Chinese soldiers learned from foreign military developments in the decade before the outbreak of the Second Sino–Japanese War (1937–1945). Focusing on the Northeast Army (*Dongbeijun*) and the National Revolutionary Army (*Guomin gemingjun*), the article analyzes the role of Chinese intellectual officers in military change. It considers how they used professional military journals, which were at the time a new means of disseminating military knowledge, as a medium to discuss military issues, resolve differences in opinion, and push forward changes in tactics, equipment, and organization. It also suggests that some intellectual Chinese officers were fixated on the pursuit of a post-First World War modern approach to war that relied mainly on technology and industrial capability. However, this “modern” approach to war proved in practice to be rather inappropriate for contemporary conditions in the Republic of China.

KEYWORDS

Intellectual officers; Chinese military history; National Revolutionary Army; Northeast Army; professional journals

Introduction

Studies of the military history of the Republican period (1912–1949) usually focus on the various civil wars of the 1920s and 1930s; the phenomenon of warlordism; the impact of Soviet and German advisors on the National Revolutionary Army (NRA); the evolution of the Communist army; the development and preparation of the NRA during the 1930s for the coming war against Japan; the performance of the NRA during the Second Sino–Japanese War; and finally, the Chinese Civil War of the late 1940s. In these studies, military effectiveness is generally attributed to a variety of factors including political and military leadership, organizational and ideological advantage (especially the party army system), international support, the use of strategy and deceit, and the mobilization of national and local resources.¹

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¹Li Yunhan, *Cong ronggong dao qingdang*; Guofangbu shizheng ju, *Beifa zhanshi*; Jiang Weiguo, *Beifa tongyi*; Jiang Yongjing, *Guomin geming*; Huang Xiurong, *Guomin geming shi*; Yang Tianshi, *Jiangshi midang*; Jordan, *Northern Expedition*; Wilbur, *The Nationalist Revolution*; Saich, *Origins of the First United Front*; van de Ven, *War and Nationalism*; and Tochigi Toshio and Sakano Ryōkichi, *Chūgoku kokumin kakumei*. For the development of the Chinese Nationalist Army before and during the Second Sino–Japanese War, see Liu, *A Military History of Modern China*; Hsu, *History of the Sino–Japanese War*; Chi, *Nationalist China at War*; Hsiung and Levine, *China's Bitter Victory*; Chang, “Nationalist Army Officers,” 1033–1056; McCord, *Military Force*; and van de Ven, *War and Nationalism*. Recently, excellent works have addressed more specific topics related to the Nationalist Army such as the military thinkers of the time and the implementation of a conscription system during the war. For example, Landdeck, “Under the Gun”; Landdeck, “Chicken-Footed Gods,” 56–82; and Setzekorn, “Jiang Baili,” 142–161.

This article seeks to further our understanding of warfare in Republican China by taking a closer look at the understanding of modern warfare among Chinese officers and particularly among those officers who were directly responsible for organizing, educating, and equipping the Chinese armies. It argues that through debates within the military institution as well as in the professional military journals, these officers tried to develop an understanding of modern warfare in the context of potential Japanese threat, rather than merely copying from the examples of other countries (particularly Japan). The intellectual officers of the Northeast Army (*Dongbeijun*) and the National Revolutionary Army (*Guomin gemingjun*) will be used as examples. The term “intellectual officers” was introduced by Morris Janowitz to describe officers who are intellectually active. According to Janowitz, an intellectual officer “brings an intellectual dimension to his job. He sees himself primarily as a soldier...” and his “intellectual quality is held in check by the needs of the profession.”² The intellectual officers of the Northeast and National Revolutionary Armies had much in common and played much the same role in their respective armies. Most of them had received modern military training either in Japan or in the modern military academies that were established in China from the 1890s to the 1920s. Their shared understanding of modern warfare was heavily influenced by Japanese theory and practice. These cadres of intellectual officers wanted to develop a modern military science in China by such means as military educational institutions, military academic publishing, the publication of training manuals, and more generally by introducing changes in training and equipment. Such officers differed from predecessors such as the Xiang and Huai Army leaders, who were more reliant on Chinese methods, or other leaders who relied mainly on foreign instructors.

The Republican period overlapped with two world wars that led to rapid and substantial military change around the world.³ During the interwar period (1919–1939), militaries of the world tried to learn from the First World War. The First World War brought about major changes in thinking on military strategy and tactics and also saw the mobilization of whole societies in fighting a protracted industrial war. In this process, professional military journals served as one of the most important platforms for officers to discuss military matters. Despite political volatility, such journals were also found in China, established and run by Chinese intellectual officers. Although the numbers of intellectual officers in the two armies were small compared to counterparts in Japan and other countries, they nevertheless played an important role in their capacities as military administrators, staff officers, and instructors in military academies, in pushing forward military modernization.

Surprisingly, many of these professional military journals survived for some time, especially those published by the Northeast Army and the NRA between 1928 and 1937. While the *Northeast Monthly of Military Affairs* (*Dongbei junshi yuekan*, hereafter *NMMA*) had a short life of only three years (it ceased publication when the Japanese Kwantung Army seized Manchuria in 1931), other journals such as the *Military Magazine of the National Revolutionary Army* (*Guomin gemingjun junshi zazhi*, hereafter *MMNRA*) continued well into the Second Sino–Japanese War. Such journals

²Janowitz, *The Professional Soldier*, 431; Horn and Harris, *Warrior Chiefs*, 159.

³Millett and Murray, *Military Effectiveness*.

provide a rich and untapped source of information on the ideas of Chinese military officers of the time. This article makes use of these journals, supported by other archival and biographical sources, to show the progress made by Chinese officers over the course of this decade in understanding modern warfare and in attempting to introduce military modernization in a Chinese context.

Specifically, this article first discusses the technological and technical contexts in which Chinese officers modernized their military forces during the first decades of the twentieth century. Against this background, it then considers the emergence of communities of intellectual officers and of professional military journals. Several examples are cited to show the impact of these journals and officers during the period concerned. This article suggests that these intellectual officers had a positive impact on the tactical capability of the NRA and the Northeast Army in terms of both infantry tactics and combined arms operations. It also shows that many of the intellectual officers of the National Revolutionary Army and the Northeast Army were deeply influenced by their Japanese, European, and American counterparts and adopted a technology-oriented approach to war. While this approach may have been suitable for industrialized societies, some of its components such as air and tank doctrines were clearly less suitable for China at that time.

Chinese military reforms, intellectual officers, and professional military journals

Chinese military reforms and the emergence of professional military journals

Beginning in the 1860s, China and Japan both started to reform their military forces by introducing Western training, equipment, and organization. Over four decades, Japan transformed its military after the European model; the government equipped its army with the latest weaponry, adopted Western tactical doctrines, and established national conscription.⁴ A military education system that consisted of a staff college, an officer academy, and a number of preparatory and specialist schools was also established. Western military science, first introduced to Japan by the Dutch, the French, and then the Germans, flourished. One of the dimensions of Japanese military modernization during this period that is often overlooked was the establishment of professional military journals following the model of the German army. In 1888, the Imperial Japanese Army established the *Journal of the Kaikōsha* (*Kaikōsha kiji*), which was modelled after the German *Military Weekly* (*Das Militärwochenblatt*). Articles focused on the latest tactics, new equipment, and foreign military news. Some of these articles were translations of European pieces (mainly German and French). Others, however, were original contributions by Japanese officers. These professional journals helped to disseminate the latest military knowledge and to promote uniformity in training, doctrine, and mindset among Japanese officers. They also encouraged discussion and research, although dissident voices were often suppressed. Following these decades of modernization, Japan defeated first the Qing Empire and then Russia.⁵

⁴Kornicki, *Meiji Japan*, 246–258.

⁵Wells and Wilson, *The Russo–Japanese War*, 31.

After the Sino-Japanese War, hundreds of Chinese officers studied in Japan, including future military leaders such as Sun Chuanfang, Yan Xishan, and Chiang Kai-shek, along with well-known intellectual officers such as Jiang Baili. A commentator suggested in 1920 that nine out of ten of the most prominent Chinese military leaders were graduates of *Shinbu Gakkō* (*Zhenwu xuexiao*), a junior military academy founded for Chinese officers.⁶ After the Boxer Uprising, the Qing government introduced a military education system along Japanese lines. The Baoding Military Academy (*Baoding jun-guan xuexiao*) and the Staff College (*Lujun xuetang*, later known as the *Lujun daxue-tang*) were modelled after their Japanese counterparts. The Japanese curriculum and textbooks were used in these institutions, along with Japanese instructors.⁷ Modern military science was thus introduced to China through the lens of Japanese instructors. One of these instructors was Major Taga Muneyuki, who had commanded a company of the Imperial Guards of the Imperial Japanese Army before teaching at the Baoding Military Academy.⁸ He founded the *Journal of Military Affairs* (*Wubei zazhi*) at Baoding, wrote a tactical manual in Chinese in 1906, and translated Japanese military textbooks into Chinese.⁹ Another instructor was Kawakita Daijirō, who taught at the Staff College from 1906 to 1908. He was also paid by the Qing government to pass on secret Imperial Japanese Army reports concerning the Russo-Japanese War and other materials that had previously been unavailable to Chinese students in Japan. He was later killed by Japanese agents in Beijing.¹⁰ Guided by the Japanese instructors, Chinese cadets and officers studied war within the framework of Western military science, and they studied the battles of the Russo-Japanese War extensively. Although most of the Japanese instructors were sent back to Japan after the 1911 Revolution, their influence remained.¹¹ For example, the Russo-Japanese War dominated the syllabus in Chinese military academies even after the First World War. The Chinese also adopted Japanese training manuals instead of German manuals.¹²

During this process of military modernization, professional journals played an important role. Between 1901 and 1911 contributors to military journals such as the *Journal of Military Affairs*, *Military Monthly* (*Junshi yuekan*), and *Military Learning* (*Wuxue*, 1908–?) generally looked to Japan as their model.¹³ Among these new journals, the *Journal of Military Affairs* was arguably the most important. Its intended readers were Chinese instructors and cadets of the Baoding Military Academy. A large number of contributions were translations of Japanese articles on various military matters. Chinese instructors also contributed. Some of the contributors later became key administrators of the Chinese army: for example, Jin Shaozheng, who wrote a number of articles on infantry tactics, eventually rose to become the Vice-Minister of War of the

⁶Luo Zhitian, *Luanshi qianliu*, 84.

⁷Wang Jiyao, *Zhongguo jindai junshi jiaoyu*, 128–129; and Mi Zhenyu, *Zhongguo junshi xueshushi*, 144.

⁸His Chinese name was He Zhongliang. “Taga hohei taii Shin koku he ohei no ken” [Documents Concerning the Employment of Captain Taga by the Qing Government], June 11, 1902, Rikugun shō dai nikki [Records of the Ministry of War], Ref. C07041670500, slides 1–8, https://www.jacar.archives.go.jp/aj/meta/image_C07041670500.

⁹Shi Duqiao, *Zhongguo jindai junshi sixiang shi*, 91; and Wang Jianhua, “Lun lieqiang dui man-Qing junshi,” 105.

¹⁰Li Bingzhi, “Ribei junshi jiaoguan,” 222; and “Kawakita jiken nikan suru hōkoku” [Report on the Kawakita Incident], Nov. 21, 1908 to March 27, 1909, Mitsu dai nikki [Secret Records of the Imperial Japanese Army], Rikugun shō dai nikki, Ref. C03022952400, https://www.jacar.archives.go.jp/aj/meta/image_C03022952400.

¹¹Fung, *The Military Dimension of the Chinese Revolution*, 84–85.

¹²Kwong Chi Man, “Yijiyiyi nian Hankou,” 285–287.

¹³Li Xisuo, “Xinhai geming shiqi,” 45.

Beiyang government.¹⁴ Thus, as Edmund Fung suggested, by 1911 “there had emerged, in a professional sense, a new class of young, modern-educated scholar-officers”.¹⁵

The introduction of professional journals as a means of disseminating modern military knowledge was interrupted by the end of the Qing Empire in 1912. Although the Republican government largely followed the Qing government’s policy regarding military training and education, political instability meant that the Education Department of the Ministry of War (*Junxuesi*) struggled to keep the academies running. The Baoding Military Academy was closed in 1923 due to lack of funding, leaving the Staff College as the only institution controlled by the Beijing government that was operational from 1923 to 1928. Meanwhile, modern institutions of military education persisted in the Northeast Army and the Nationalist Army. The former expanded the provincial military academy of Fengtian into a modern institution that provided two years of training to officer cadets. With Soviet support, the Kuomintang established the Whampoa Military Academy in 1923. At its inception, the Soviet advisors proposed that it was only necessary to provide political indoctrination to Nationalist soldiers rather than to provide training in the latest tactics adopted by the major powers after the First World War.¹⁶ The situation had changed little by the end of the Northern Expedition: according to American observers, even the best armies in China lagged considerably behind in terms of training, organization, and equipment. Thus, after the Northern Expedition, all armies in China tried to catch up with their Japanese and European counterparts, and military journals served as an important tool in this process.

The *Northeast Monthly of Military Affairs* was first published as *Spirit Monthly* (*Jingshen yuekan*) from 1922 to 1924. Thereafter, the Northeast Army experienced almost continuous fighting until the end of the Northern Expedition in June 1928.¹⁷ After Zhang Zuolin was assassinated, his son, Zhang Xueliang, succeeded his father as leader and reorganized the Fengtian Army. Under Zhang Xueliang, this army’s official name was the Northeast Border Defence Army (*Dongbei bianfangjun*); it was more commonly known as the Northeast Army. The size of the army was reduced, and attempts were made to further modernize and introduce mechanization. Two cadet corps for junior officers and noncommissioned officers were formed.¹⁸ *Spirit Monthly* was also reformed, and its title was changed to *Northeast Monthly of Military Affairs*.¹⁹ The first volume of the NMMA appeared in October 1928, four months after the death of Zhang Zuolin. It was published by the General Staff of the Headquarters of the Three Eastern Provinces (*Dongsansheng baoansilingbu junlingting*), located on “Machine Gun Hutong” (*Jiguanqiang hutong*) in Shenyang. In all, between October 1928 and the outbreak of the Mukden Incident in September 1931, 31 volumes of the NMMA were published.

The NMMA’s stated goal was to encourage intellectual exchange among the officers of the Fengtian Army. It gradually became an important means to cultivate a

¹⁴Kwong Chi Man, “Yijiuyiyi nian Hankou,” 286.

¹⁵Fung, *The Military Dimension*, 76.

¹⁶United States War Department, Military Intelligence Division, “Complete Rewriting of Military Training,” April 16, 1928, 307–310.

¹⁷Although *Spirit Monthly* was published for more than two years, almost no copies survive.

¹⁸“Dongbei jiangwutang jiaodaodui,” 9.

¹⁹Zhi Bai, “Junshi yuekan zhi shiming,” 1.

community of intellectuals, including both officers and civilians, who were interested in military reform. The *NMMA* was patronized by a list of honorary editors who also contributed. The list included officers of the Fengtian Army such as He Chuguo, Jing Youyan, Liu Yifei, Ji Yiqiao, and even civilian officials such as Zhao Enbo (a Tokyo Imperial University law graduate) and civilian intellectuals such as Zhang Dongsun.²⁰ The *NMMA* also provided a platform for soldiers and officers from different branches to communicate. The honorary editors included not only army officers but also officers from the Fengtian navy and air force. Copies of the journal were also bought by these two branches and their training institutions. Contributors to the journal included not only senior officers, but also junior officers and even the rank and file. For example, a corporal published a short piece about managing the daily life of soldiers, and a platoon commander discussed the importance of raising the literacy rate of ordinary soldiers.²¹ The *NMMA* also introduced essay competitions to encourage original contributions: for example, the journal held a series of essay competitions to collect opinions from officers on issues such as the introduction of new weapons, new training methods, the conscription system, and the establishment of mobilization institutions in the Northeast.²² To increase its value to readers, it also carried news, orders, regulations, and even trial records.

The journal was divided into several parts: pictures (*tuhua*), discussions (*lunshuo*), academic articles (*xueshu*), translations (*yishu/yizhu*), investigations (*diaocha*), news (*xinwen*), orders (*mingling*), legal orders (*faling*), and miscellaneous (*zajian*). Unlike other contemporary military journals of the time that mainly published translated work from Japan or other countries, the *NMMA* encouraged original contributions.²³ This showed a genuine wish to move away from the previous approach of the Chinese military, which was to learn from the West through Japanese eyes. Manuscripts were graded by the editorial board, with the best contributors receiving handsome rewards for their work. For example, a staff officer received 125 yuan for his 2,500-word essay on the importance of national mobilization in modern warfare.²⁴ A rigorous set of rules was created to maintain the quality of contributions: articles had to be original and never published elsewhere unless stated; they had to be reviewed by the editorial board; and sources of information and references had to be listed. The journal preferred the use of classical Chinese, although vernacular Chinese was also accepted; most of the articles were written in a mixture of classical Chinese and vernacular Chinese. This reflected the educational background of readers.²⁵

In order to cultivate a community of intellectual officers, the *NMMA* was not published for profit. The price of each volume, despite its professional orientation and length (more than 200 pages per volume), was only 0.4 yuan. Yearly subscriptions were only four yuan, affordable even for junior officers. Of the five thousand copies printed in October 1928, 357 were given as complementary copies to people such as the honorary editors, and most of the rest were sold to different units. For example, the

²⁰For an example of the list, see the last page of the first volume of the *NMMA*.

²¹Zhang Guan, "Guanyu dongbei jundui," 3–6; Yu Gaoxiang, "Jinhou jundui jiaoyu," 21–31; and Song Pengnian, "Junren baojian," 5–30.

²²"Wenti zhenggao," 1.

²³Zhi Bai, "Junshi yuekan zhi shiming," 1.

²⁴"Benshe tebie qishi," 3.

²⁵"Junshi yuekan tougao zhengwen," 1.

military headquarters of Jilin and Heilongjiang ordered 865 and 430 copies respectively, each infantry brigade ordered 142 to 109 copies, and the air force ordered 97 copies. Only 52 copies were sold to members of the public.²⁶ This also revealed the main purpose of the journal, which was to educate the officers of the Northeast Army and foster their sense of community.

After the Northern Expedition, the Beijing government was overthrown by the Kuomintang, which then formed the Nationalist government in Nanjing and set out to develop a comprehensive military education and training system for the NRA. In this process, full use was made of the teaching materials and personnel of the military education system of the Beijing government. The books and materials stored at the Ministry of War in Beijing were transferred to Nanjing.²⁷ Officers who had taught at the Staff College and Baoding Military Academy were invited to teach at Nationalist institutions.²⁸ By 1935, the Nationalist government had established a staff college; an officer academy; and specialized schools for the infantry, the artillery, the cavalry, engineers, mechanized forces, and other branches including antiair artillery. According to American intelligence in 1936, around 50,000 officers of all ranks were trained or retrained in these institutions.²⁹ This rapid expansion of military education was concentrated in the Nanjing area, providing a fertile ground for the development of the professional military journals.

The most important of these journals was the monthly *Military Magazine of the National Revolutionary Army* established in November 1928. The *MMNRA* was originally the publication of the Officer Training Unit (*Junguantuan*) and had only one chief editor, two permanent editors, and a small staff of several officers and men who were responsible for proofreading, bookkeeping, and accounting.³⁰ The first chief editor of the journal was Wang Boling, who had been a senior instructor at the Whampoa Military Academy but lost his position when he deserted his troops during the Battle of Nanchang in 1926.³¹ Since its inception, the *MMNRA* stressed its role as a medium through which NRA officers could communicate and maintain ideological uniformity. Wang wrote:

in the Orders Section one can read about personnel updates; in the Research Section one can read about the latest military technology and discussions of military theories . . . even if [officers] have not seen each other for years . . . they can still feel as if they are in the same room. Under the guidance of a semiofficial journal, their minds will become one.³²

The importance of this role explained why the *MMNRA* came under the control of the Ministry of Military Administration (*Junzhengbu*). In 1934, the *MMNRA* underwent

²⁶"Benkan qishi," 3.

²⁷Xunlian zongjianbu, *Minguo shiba nian gongzuo baogaoshu*, 1; and "Xunlian zongjianbu she tushushi," 186.

²⁸For example, the inspectors of the infantry, the cavalry, the artillery, engineers, and logistics, as well as the head of the Military Studies Translation Bureau (*Junxue bianyishu*) were all officers who had served in the Beijing Government or northern armies before 1928.

²⁹United States War Department, Military Intelligence Division, "Statement of Commissioned Strength and Classification as to Training," Feb. 25, 1936, 120; and also see Chang, "The National Army," 199.

³⁰"Benshe zhiyuan xubao yilianbiao," 1.

³¹Chen Yuhuan, *Zhongguo liuxue Riben*, 48.

³²Wang Boling, "Xuyan," 1–2.

another restructuring, in which the most important change was the appointment of Chiang Kai-shek as the head (*shezhang*) of the journal.³³

By 1934, the *MMNRA* was divided into the following sections, each devoted to a particular aspect of military affairs:³⁴

- (1) Military Science (*xueshu*) included discussions of mechanization, chemical warfare, electronic warfare, new weapons, and other military technologies.
- (2) Discussions (*lunshuo*) covered discussions of national defence planning, the state of foreign military forces, military thinking, and pieces that aroused nationalist feelings.
- (3) Tactics (*zhanshu*) elaborated on tactical doctrine and principles and presented studies of practical tactics against better-armed enemy forces.
- (4) News (*tongxun*) provided military news from China and abroad.
- (5) Images (*huaxiang*) was responsible for photographs of military leaders and military forces in general.

The editorial and reviewing process of the *MMNRA* became increasingly elaborate. By the mid-1930s, manuscripts had to go through four reviews and revision by a team of editors and proofreaders. The editor-in-chief (*zongbianji*) would then decide whether or not to accept the final manuscript for publication.³⁵ This reflected the growing importance of the journal and the progress made by the Nationalist military in establishing a modern system of military education.

The *MMNRA* sometimes ran special issues on specific topics. As its editors suggested, these special issues were intended to focus the entire army's attention on a specific issue. Between 1928 and 1937, the *MMNRA*'s special issues included "International Military Developments and China in the Past Year," "Special Issue on the Soviet Armed Forces," "Air Defence," "The Far Eastern Military Situation," "Special Issue on the Training Manuals," and another special issue with articles written by officers who were studying in Europe. Apart from the *MMNRA*, the Nationalists established a total of at least 19 professional military journals between 1928 and 1937. Among them, five were published by the Ministry of Air and the Air School at Hangzhou, two by the Navy, and one by the Military Advisory Council (*Junshi canyiyuan*). Others were published by individual units, and almost all military educational institutions had their own journals. Most of these journals followed the format of the *MMNRA* and contained original and translated articles that targeted officers or cadets of military academies. The establishment of these journals can be seen as a concerted effort by the NRA to enhance the intellectual capability of its officer corps.

Intellectual officers and military journals

The contributors to the professional military journals varied from cadets of military academies to senior officers and even foreign advisors. These contributors could be seen

³³"Guomin zhengfu junshi weiyuanhui junshi zazhishe," 145–148.

³⁴"Junshi weiyuanhui junshi zazhi tougao," 64.

³⁵"Junshi zazhi zhi chuban," 1.

as the core of the communities of intellectual officers of the Chinese armies. Many of the articles published in the *NMMA* were written by the journal's editors. Initially, the *NMMA* was managed by an editorial board headed by Zhou Yawei (1889–1976) and Xu Zhuyi (1895–1976). Zhou had received preparatory military education in Zhejiang from the year 1906 and was a member of the *Tongmenghui*. Between 1913 and 1919, he studied at staff colleges in Beijing (*lujun daxue*) and in Japan. He served in the Ministry of War in Beijing and taught at the Staff College until 1925, when the Provisional Government under Duan Qirui was overthrown. He then joined the Fengtian Army as a senior staff officer. After the death of Zhang Zuolin, he was appointed by Zhang Xueliang as the head of military education of the Fengtian Army.³⁶ He soon left his posts to serve as the Deputy Inspector General of Training of the NRA (*Xunlian zongjianbu fujian*). Xu Zhuyi was a graduate of Baoding Academy and the Staff College of Japan.³⁷ The other members of the editorial board were all officer graduates of Baoding Academy, almost all of whom graduated in 1918.

Similarly, the *MMNRA* and other journals of the NRA relied on external contributors, as well as the editors themselves, to provide articles. Between 1928 and the end of 1937, the *MMNRA* published 1,329 articles that had a specified author. Some of the contributors held prominent positions within the education system of the NRA. The best example is Yang Jie (1889–1949), who held senior staff positions from 1928 to 1937. Yang, a native of Yunnan, had studied in the Yunnan Military School, the Baoding Academy, the *Shikan Gakko*, and the Staff College of Japan. By 1932, he had risen to the post of Head of Education of the Staff College. He wrote articles for NRA journals and was also chief editor of *The Staff College Monthly* (*Luda yuekan*). He also wrote books on national defence policies, such as the *New Theory on National Defence* (*Guofang xinlun*, 1934).³⁸ Arguably, Yang's influence on the NRA during this period was greater than that of Jiang Baili, who did not hold formal positions in the education institutions or publish extensively during the 1930s. Many of the officers of the NRA who held staff positions during the Second Sino–Japanese War, such as Liu Fei (1898–1983) and Wu Shi (1894–1950), were Yang's students; they also contributed to the journals, discussing theoretical issues such as the applicability of Clausewitz's theories in Chinese warfare.³⁹

Another example of these intellectual officers was Xie Chengrui (1904–1937), the chief editor of the *MMNRA* from 1934. Xie's parents were revolutionaries who died when Xie was only 15. He was helped by his parents' comrades and was sent to France in 1920. He eventually enrolled in the Lyon Sino–French Institute in 1927.⁴⁰ After he returned from France, he joined the Thirty-Fifth Army and started a professional military journal to enhance intellectual vigor among the officers. However, he was soon transferred to the Artillery School to serve as an instructor; at that time, he also taught at the Staff College and the Training Unit (*Jiaodu zongdui*). He visited Europe with Yang Jie from late 1933 to late 1934, and, after briefly serving as one of the editors, was soon promoted to chief editor of the *MMNRA*. In 1936, he was appointed as one of

³⁶Qian Fanglai, "Zhou Yawei zhuanlue," 86–89; and Chen Yuhuan, *Lujun daxue*, 582–583.

³⁷Chen Yuhuan, *Baoding junxiao*, 699–700.

³⁸Yang Dehui, *Yang Jie jiangjun*.

³⁹For example, Wu Yuxun, "Zhanshu zhi genben guancha," 101.

⁴⁰The record shows that he was one of two students who studied "the military" in the institute, but no details of their actual curriculum could be found; it was unlikely that he received any education and training from formal French military academies. "Liste des étudiants inscrits à l'IFCL."

the regimental commanders of the Training Unit. Before 1937, he contributed a dozen articles to the *MMNRA* and other journals on armament, air power, and the arms industry.

Some of the major contributors to the NRA journals were less well-known officers who worked exclusively in the education system, such as Ning Litai (1887–1960). Ning was a native of Fujian who reached the rank of *xiucai* in 1903, two years before the abolition of the civil service examination. He received military training from Fuzhou Military School (*Fuzhou wubei xuetang*) and Baoding Academy and was then posted to teach at Yunnan Military School (*Yunnan wubei xuetang*), where Yang Jie also worked as an instructor.⁴¹ Ning was one of a rare breed of officers in this period who spent much, if not all, of their active careers in the Chinese armies as instructors, translators, and researchers. By 1937, he had already published more than 100 original or translated articles in the *MMNRA* or other NRA journals, covering a variety of topics including national defence policy, tactics, national mobilization, and legal dimensions of war. Even though he is little known to present-day historians, he was probably the most prolific Chinese writer on military subjects between 1928 and 1937.

Intellectual officers and military change

The intellectual officers and the professional military journals played an important role in the reforms of the Northeast Army and the NRA. The journals served as a means of disseminating the latest military knowledge and of uniting the opinion of the officer corps over professional and even political issues. They were also platforms for officers and men to voice problems and make suggestions, and they helped the armies to collect opinions on specific issues. Over the course of the decade, the journals and the intellectual officers had much impact on the Northeast Army and the NRA: examples of areas where this impact was felt included the adoption of new infantry tactics, the use of new weapons such as tanks and aircraft, the development of combined arms warfare, and changes in equipment and organization. However, as discussed below, the intellectual officers of these two armies were advocating the adoption of a technologically intensive approach to war that was more suitable for industrialized societies than for the Chinese Republic (or the Northeast regime) during the 1920s and 1930s.

Technological and technical contexts

Warfare in Europe and the world had already changed considerably in the second half of the late nineteenth century because of the “firepower revolution.”⁴² By the beginning of the First World War, the firepower facing individual soldiers on the front line had increased exponentially as the result of the emergence of magazine rifles, machine guns, and hydro-pneumatic recoil field guns.⁴³ This led in due course to substantial changes in army tactics. During the early weeks of the First World War, western European armies launched large-scale offensives, all of which failed in the face of the defenders’

⁴¹Ning Lizhao and Ning Lifeng, “Yi fuqin Ning Litai,” 138–144.

⁴²Black, *War and the World*; Gates, *Warfare in the Nineteenth Century*; Black, *Introduction to Global Military History*; and Black, *War in the Nineteenth Century*.

⁴³Biddle, *Military Power*, 34.

overwhelming firepower. While the vastness of the battlefield still made possible a war of movement on the Eastern Front, the war in the west became deadlocked, and both sides launched numerous futile frontal attacks against well-prepared enemy positions.

Many tactics and tools were employed in order to break the stalemate. In April 1915, the Germans first deployed poisonous gas to support an offensive. Although gas was then used throughout the rest of the war, in reality its effectiveness as a weapon of war was limited. In the following year, tanks were introduced. The potential of this weapon was well recognized, but early tanks proved both too slow and mechanically too unreliable to bring about decisive results. Tactical innovations, on the other hand, were more promising in breaking the stalemate. Beginning in 1915, the German army started experimenting with new infantry tactics conceived by Colonel Max Bauer, who had used these tactics with some success on the Western Front. Bauer's experiments led to the formation of *sturmtruppen* battalions that excelled in small-unit tactics, supported by an array of weapons from light machine guns to infantry guns. The infantrymen were also given hand grenades, submachine guns and flame throwers to make them more effective and flexible. The British and French armies also made changes to focus more on small-unit tactics, with varying degrees of success. During the Battle of the Somme in 1916, the British army introduced the creeping barrage, a novel way of using artillery to support infantry advances.⁴⁴ Because of the war, the air forces of the European powers emerged from small specialist branches into independent forces. They played an increasingly important role in supporting land operations by flying reconnaissance, spotting, ground attack, and communications missions. The European powers also began to appreciate the potential of air power to launch strategic strikes against enemy cities and industrial centers.

By the end of the war, most of the major European armies had adopted new tactical and operational doctrines. The most important directions of change were in terms of air power, mechanization, combined arms operations, and small-unit infantry tactics. During the interwar period, the armed forces of the rest of the world were also eager to learn from the lessons of the war in Europe. Countries such as China and Japan sent observers to the front to collect information. Over the course of the war, the Imperial Japanese Army alone produced 1,145 reports about different aspects of the war, from infantry tactics to economic mobilization.⁴⁵ Despite political turmoil, the Beijing government also sent two groups of observers to Europe in 1916 and 1917. The groups of officers visited Britain, France, and Italy, as well as the United States. However, following the visits and because of the rapid deterioration of the political situation in China, many of these officers deserted the Beijing government and served in other military factions such as the Fengtian clique.⁴⁶

Discussions of tactical change

To the Chinese intellectual officers of the time, the biggest problem facing modern armies was the superior firepower of the defenders. During the 1920s, the lessons of the

⁴⁴ Boff, *Winning and Losing*.

⁴⁵ Kuzuhara Kazumi, "'Sentō kōyō' no kyōgi keisei," 19.

⁴⁶ For example, Han Linchun, who briefly served as a military attaché in the United States and went to France during the Paris Peace Conference, became the head of the Fengtian Arsenal during the 1920s. See Kwong Chi Man, *Minguohu? Junguohu?*

First World War had yet to be fully appreciated by Chinese officers, as the fighting during the Zhili–Fengtian Wars and the Northern Expedition shows. After 1928, however, intellectual officers who had combat experience started to realize that will-power was not enough to overcome modern firepower. This statement by one Chinese officer in an article about logistics and war is an example of this changing attitude:

Modern warfare is incomparable with old ways of fighting; high morale and the so-called human-bullet tactics (*roudán zhànshù*) can no longer guarantee victory. It is scientific discovery and the application of technology that decide who will be victorious ...⁴⁷

Many articles in the Chinese military journals at that time dealt with infantry tactics, particularly attacking an entrenched enemy under heavy fire. Most of these articles, while recognizing the importance of an offensive spirit amongst the troops, placed overwhelming importance on organization, firepower, combined arms warfare, and decentralization of command. The first volume of the *MMNRA* included an article on modern tactics by the instructors of the Officer Training Unit. Its authors urged readers to understand the importance of cover, dispersion, and small-unit tactics. They suggested that

as modern firearms have become more effective and have a longer range ... infantry companies may suffer heavy losses before reaching the enemy, or even lose their forward momentum when they reach the front. According to the experience of the European War, in order to minimize losses to artillery fire, it is necessary to disperse the troops by organizing [infantry companies] into platoons that can support each other and take initiatives to advance when they see fit.⁴⁸

Contributors to the *NMMA* also discussed the need to introduce new firearms to the Northeast Army. For example, it was suggested that infantry rifles were too long to be used efficiently on the modern battlefield and that shorter carbines should be adopted. Contributors also urged the introduction of light machine guns, automatic rifles, mortars, grenade launchers, and infantry guns.⁴⁹

This respect for defensive firepower, however, did not stop the Chinese officers from emphasizing the value of offensive actions. This emphasis was expressed by many officers such as Zhang Xiguang (1898–1978), a Baoding graduate who was a senior staff officer in the Fengtian Army. Before joining the editorial board of the *NMMA*, he had participated in the two Zhili–Fengtian Wars, the wars against Feng Yuxiang in 1925–1926, and the Northern Expedition. In one article, he suggested that it was impossible to end a war through a single decisive engagement, as in the Napoleonic Wars, because of the ability of modern states to muster resources for a protracted conflict. However, he maintained that it was still necessary to go on the offensive, particularly at the strategic level, as the cost of a protracted war could be unacceptably high. Although he went so far as to suggest that one should launch infantry assaults even without artillery and machine gun support, he also stressed that such attacks were only feasible against an inferior force unprotected by elaborate defenses. He concluded

⁴⁷“Tielu zhi zhànshù shìyòng,” 51.

⁴⁸Junguantuan xuèshùzú, “Lian zhānkāi shūkāi zhī jièxī,” 5.

⁴⁹Li Daishan, “Bùqiāng zhūyuán zhī biānqiān,” 10; Li Yonglin, “Zhīdāntōng shìyòngfā,” 1–10; and Ge Tian, “Shìjiē dàzhān hòu bīngqì zhī qūshì,” 1–20.

that while an offensive spirit remained important, one should never underestimate modern firepower.⁵⁰

The prevalence of this attitude persuaded the Chinese officers to adopt the small-unit infantry tactics developed by European armies towards the end of the First World War. The *NMMA* published a translation of “Observations of the Stormtroop Tactics during the European War” (*Ouzhou zhanzheng jixi zhanfa shiqi zhi zhanshu guanचा*) written by the General Staff of the Imperial Japanese Army. The article discussed the evolution of stormtroop tactics, compared the French and German examples, and used the battles of Riga and Caporetto as examples. It also used the evolution of the French Army defensive doctrine that focused on large reserves, flanking counterattack, and multi-layered defensive areas to illustrate possible countermeasures against stormtroop tactics.⁵¹ The article extensively quoted German, French, and British manuals and instructions. To counter stormtroop tactics, Xu Zhuyi suggested using multiple mutually supporting defensive lines to create a series of defended areas. His use of the analogy of “armor” and “rubber band” to describe pre-1914 and more recent defensive tactics suggested that he had some in-depth understanding of the theory of defense.⁵²

In the *NRA*, a similar doctrine was also thoroughly discussed, and much attention was paid to increasing infantry firepower. In his article on the organization of infantry regiments published in 1929, Ning Litai proposed to increase the number of support weapons such as infantry guns, mortars, and heavy and light machine guns, as well as to enhance battlefield communication. He also noted the need to procure antitank guns and anti-aircraft guns.⁵³ At that time, none of the infantry regiments of the *NRA* had any support weapons other than a few heavy machine guns. Ding Boheng, a graduate of the Virginia Military Institute, also noted that while the number of rifles in the US Army infantry regiments had decreased, their firepower had actually increased because of the increase in the number of support weapons.⁵⁴ More progressive suggestions such as the replacement of rifles with submachine guns or automatic rifles were also put forward.⁵⁵

As the Chinese officers were influenced by the theories of small-unit tactics and in-depth defence, they also paid much attention to the decentralization of command at the front line. A regimental commander urged the Northeast Army to train noncommissioned officers for small-unit command and to encourage them to take initiatives during battles.⁵⁶ Both the *NMMA* and the *MMNRA* tried to develop an independent spirit among their readers with essay competitions and exercises. The *NMMA* organized an essay competition on a hypothetical operational situation in which readers were given the choices of following the existing order or seizing the opportunity to achieve a potentially greater result. The editors of the *NMMA* encouraged readers to acquire a “decisive and adaptable mind” (*duduan shiying qingkuang zhi jingshen*).⁵⁷ The *MMNRA*

⁵⁰Peiwen, “Xianzai ji jianglai zhanzheng,” 17–23.

⁵¹Zhang Xiguang, “Ouzhou zhanzheng jixi zhanfa,” 7, 9, 10, and 15.

⁵²Xu Zhuyi, “Shuxian zhendi zhugou bixie,” 71.

⁵³Ning Litai, “Bubingtuan bianzhi zhi taolun,” 49–53.

⁵⁴Ding Boheng, “Meiguo bubingying zhi gaibian wenti,” 157–158.

⁵⁵For example, Ding Boheng, “Zidong buqiang zhi yangeshi,” 116; and Lu Tai, “Wuguo bubing yinggai yi wufa,” 169.

⁵⁶Yu Enfu, “Sanbing zhandou zhi yanjiu,” 44.

⁵⁷“Zhanshu wenti zhengqiu da’an, *NMMA*, no. 6,” 1; and “Zhanshu wenti zhengqiu da’an, *NMMA*, no. 7,” 1–6.

published an article about a similar scenario, in which readers had to face a larger but less well-prepared enemy force. The scenario note suggested that the staff officer conveying the order of the divisional commander was killed while delivering the order to the reader. This forced the reader to assess the situation independently and to decide the next move. The note reminded readers of the constant need to “defeat a stronger enemy with swift action and decisiveness” by seizing the initiative.⁵⁸ One article on the merits of offensive action even went so far to suggest that the idiom “to wait at one’s ease for the exhausted enemy” (*yiyi dailao*) was “anachronistic Chinese rubbish.”⁵⁹

Discussions of air power, mechanization, and chemical weapons

The intellectual officers also discussed extensively some of the new weapons used during the First World War, such as aircraft, tanks, and chemical weapons. By the end of the Northern Expedition, the Northeast Army and the NRA were the only armies in China that had a functioning air force. Officers from both armies showed much interest in aerial warfare but they chose very different approaches to develop their air forces. While the Northeast officers opted for a tactical air force, the NRA officers tried to develop an air force according to the latest European theories of strategic bombing. In a translated article published by the *NMMA* in 1929, air war was described as follows:

Countries with strong air forces like Britain and France could, immediately after the declaration of war, send large groups of bombers to cross the border to destroy vital infrastructure and government organizations in the enemy’s capital city with bombs and poison gas. This would terrify the enemy population and destroy the enemy’s will to resist . . .⁶⁰

This description predates the appearance of translations of Giulio Douhet’s *Command of the Air* in Japan (1934) and China (1935) and suggests that the intellectual officers of the two countries were already in touch with similar ideas before that. However, the translator of the article, Liang Ji (one of the editors of the *NMMA*), writing under the penname Duwen, disagreed with the original article and added a remark. He maintained that, as China had a small air force compared to neighboring powers, its first role should be supporting land forces rather than raiding enemy cities. He added that any thought of using the Chinese (Northeast) air force to seek a decisive battle against larger enemy air forces (either Japanese or Russian) would be unwise.⁶¹

In contrast, the NRA was more interested in building an independent air force capable of launching strategic strikes against enemy cities. Soon after the Northern Expedition, NRA officers were sent to study air warfare in Europe. Most of them went to France, Italy, and the United Kingdom, and most returned with the opinion that the air force should be separated from the army and the navy. In the first volume of the *MMNRA*, Cao Baoqing, a deputy department head of the Air Committee, wrote about

⁵⁸Hu Bailian, “Tushang zhanshu,” 48.

⁵⁹Yu Chengyao, “Shukai zhandou jiaoyu,” 62.

⁶⁰Duwen, “Xiang dadao zhandou renwu,” 23.

⁶¹*Ibid.*, 28.

establishing an independent air force.⁶² By 1933, the air force had become an independent arm of the military. Even before Douhet's works were translated into Chinese, air power proponents in the NRA were already advocating for the establishment of an air force that focused on strategic offensives. Huang Bingheng, the head of the Education Department of the Air Committee, claimed that such an air force could allow China to destroy the Japanese fleet whenever it approached the Chinese coast, support the army to recover Manchuria, and destroy Japanese cities.⁶³ By 1937, many intellectual Chinese officers still supported the idea of strategic bombing, including the influential military intellectual Jiang Baili, who wrote a piece that year to recommend Douhet's work.⁶⁴

At the end of the Northern Expedition, the Northeast Army and the NRA were the only Chinese military forces with tanks.⁶⁵ As the two armies attempted to develop armored forces, the journals also carried many articles on armored warfare and mechanization. In contrast to some of the European countries where proponents of armored warfare met varying degrees of resistance from cavalry officers, the Chinese intellectual officers met very little resistance from the cavalry branch. This was because the two armies had only a few cavalry units and their commanders were of lower status compared to the officers of other branches, especially the infantry. Indeed, the Cavalry School of the NRA only lasted for a little more than two years from, 1933 to 1935, because of budget limitations. The debate among the Chinese officers was whether tanks should be seen as support weapons for the infantry or whether they should instead focus on mobile warfare. Judging from the discussion published in the journals, the officers gradually leaned towards the latter approach. This reflected the influence of German advisors as well as the opinions of the intellectual officers who were responsible for introducing armored warfare theories into China.

In 1928, the NMMA published an original article about light tanks written by an anonymous Northeast officer. The author suggested that, as modern firearms and artillery had rendered massed infantry attacks too costly to be feasible, tanks had become "an indispensable weapon."⁶⁶ Japanese training manuals that suggested tanks should be used only to support advancing infantry were also published in the journals.⁶⁷ However, Wang Shizhong, an editor of the NMMA, suggested that tanks were "the most important of all new weapons" and should be "concentrated in large groups at strategically important points on the battlefield"⁶⁸ and organized as independent units. If they were dispersed along the front, Wang argued, their efficiency "would immensely decline."⁶⁹ Both the NMMA and the MMNRA published articles written by the French general Maurice Gamelin (1872–1958), who called for a drastic reduction of cavalry and a replacement of horses with automobiles, armored cars, self-propelled artillery, tanks, and motorized infantry.⁷⁰

⁶²Cao Baoqing, "Woguo jiyi," 5.

⁶³Huang Bingheng, "Guanyu kongjun guofang," 34.

⁶⁴Jiang Baili, "Kaoche Yiguo kongjun," 130.

⁶⁵The Kuomintang had only a number of captured vehicles from the Northeast Army during the Northern Expedition.

⁶⁶"Qingbian zhanche qianshuo," 23.

⁶⁷For example, Li Haoran, "Tebie zhendi gongfang yanxi," 29.

⁶⁸Jingyuan [Wang Shizong], "Xianshi zhi jundui bianzhi," 30.

⁶⁹Ibid.

⁷⁰Duwen, "Faguo jiamen shaojiang," 11–15.

From 1930, the NRA journals published an increasing number of articles arguing for the concentration of armored forces. An early example was the *MMNRA* translation of an article by Lieutenant Colonel K. B. Edmunds, originally published in the *Cavalry Journal* of the US Army.⁷¹ The *MMNRA* also published General Charles P. Summerall's article on the mechanization of cavalry and coordination between mechanized forces, artillery, and air elements.⁷² In 1932, an article about the British Experimental Mechanized Force was also published.⁷³ As more officers who had studied armored warfare in Europe returned to China, more articles on this topic appeared in the NRA journals. For example, Peng Keding (1901–1962), who studied in Germany and led the first tank regiment in China, wrote an article about attacking with tanks.⁷⁴ Books and articles about defences against tanks were also published, some written by German advisors, others published by the Transport and Logistics School (*Jiaozi xuexiao*), which was responsible for training tank crews as well as for developing armored warfare theories and doctrines.⁷⁵

The intellectual Chinese officers paid much attention to chemical weapons, which had been banned in 1925 by the Geneva Protocol.⁷⁶ As China was not a signatory to that agreement, the issue was openly debated in military journals and chemical weapons were seen by many as a viable option that was relatively cheap and effective. From 1928 to 1937, the *MMNRA* published more than 70 articles on chemical warfare, including articles on the tactical use of poisonous gas, protection against chemical weapons, and production of chemical weapons. In these articles the intellectual officers revealed their distrust of international arms control efforts. An officer wrote: "all the so-called international laws could be discarded in a morning; so-called humanitarianism is not something we can rely on."⁷⁷ An officer even advocated the use of poisonous gas against cities. He explained his suggestion by highlighting the importance of winning the war quickly:

[the use of gas against civilians] is prohibited by international law. However, to overcome the enemy and win the war, who would pay attention to the law? ... As killing is the fundamental way to win, it seems that future wars can only be crueler to the people.⁷⁸

This shows the officers' lack of faith in the international peace effort during the interwar period as well as their confidence about winning a war quickly through the use of advanced technology.

Military change brought about by intellectual officers

The intellectual Chinese officers also tried to reform their militaries according to what they had discussed. In this connection, the military journals allowed the authorities to solicit opinions from the officers, disseminate the latest knowledge, and suppress

⁷¹Zhi Qiu, "Jixiehualun zhanshu zhi yuce," 73–77.

⁷²Cheng Zhongqing, "Qibing yu xinbingqi," 48–49.

⁷³Bao Liang, "Yijiuerliu nian Yingguo jixiehua budui," 131–132.

⁷⁴Peng Keding, "Tangkeche gaishui," 97–108.

⁷⁵For example, Zhou Xiuren, *Zhanche zhi fangyu*; Pierna, *Junyong qiche zhanche zhuangjiache*; and Jiaozi xuexiao, *Fangyu zhanche gangyao cao'an*.

⁷⁶"Protocol for the Prohibition."

⁷⁷Wang Liu, "Huaxue gongye yu guofang," 135.

⁷⁸Yuan Zhiwei, "Jianglai de kongzhan," 80.

dissension. Both the *NMMA* and the *MMNRA* invited manuscripts from officers on various military issues. For the Northeast Army, the main direction of military reform before the fall of Manchuria was the modernization of tactics. This process was led by a group of officers who were determined not merely to copy the latest tactics from Japan. In September 1929, Wen Nianzhong, an instructor in the Northeast Military Academy, published an article advocating a revision of the infantry tactical manual. He argued that the new manual should address the main lessons of the First World War, which included increased firepower, a war of attrition, and the dispersal of troops on the battlefield; he also pointed out the need to separate the “unchanging rules of war” from issues that would be affected by changing technology and combat environment.⁷⁹ He warned that it was important to pay attention to recent experiences of war; political, strategic, economic, and social conditions in China; and lessons from other countries.⁸⁰ For example, he suggested that as Chinese people “are known for their lack of aggressiveness and competitive spirit,” it is necessary to put more emphasis on offensive matters in the manual in order to cultivate an offensive spirit among Chinese soldiers.⁸¹ He also suggested introducing moral education into the manual to address moral decline among soldiers, as evidenced by their willingness to switch sides during civil wars.⁸² To make the manual more accessible to less well-educated soldiers, he suggested it should switch from classical Chinese to vernacular Chinese.⁸³ He also highlighted the need to introduce special tactics and equipment for troops assigned to fight in different parts of China.⁸⁴

In response to the advocacy of officers such as Wen, the Northeast Army revised its infantry manual and paid more attention to local conditions. In 1930, the *NMMA* published a serialized article in 14 parts comparing the new and old (1923) versions of the manual.⁸⁵ Although the new manual was based on the Imperial Japanese Army manual of 1928, there were significant differences between the two, the most important being their different attitude towards an offensive spirit. After the Russo–Japanese War, the Japanese Army concluded that an offensive spirit was an indispensable part of infantry tactics. This faith was unshaken by the warnings of Japanese officers who had studied the First World War firsthand, and in the Japanese training manual and Combat Outline (*sentō kōyō*), offensive spirit was emphasized. The manual of the Northeast Army, however, did not follow this practice. The Chinese added the following lines to the section on offensive spirit: “[ancient Chinese] military teaching highlighted the importance of thorough planning before taking action (*mouding er houdong*) ... [if one blindly attacked], one would fail like a wild boar charging into a trap.”⁸⁶ The Japanese manual explained that the sources of offensive spirit were patriotism and loyalty towards the emperor; in contrast, the Northeast Army manual suggested that good planning and a clear understanding of the situation were more important. The new Northeast Army manual also deleted the following line from the old manual: “if one could persist in

⁷⁹Wen Nianzhong, “Woguo jingou gaiding caodian,” 6, 7–9, and 12.

⁸⁰*Ibid.*, 4.

⁸¹*Ibid.*, 9.

⁸²*Ibid.*, 10.

⁸³*Ibid.*, 13.

⁸⁴*Ibid.*, 7–9.

⁸⁵Zhi Bai, “Xinjiu bubing caodian,” *NMMA*, nos. 15 to 29. The article was based on a Japanese book that compared Japan’s new and old infantry training manuals, but the Chinese translators introduced many changes to the original work. See Yokō Tamizō, *Shin hohei sōten no kenkyū*.

⁸⁶Zhi Bai, “Xin jiu bubing caodian, pt. 1,” *NMMA*, no. 15, 11.

attacking irrespective of cost, one could break the enemy's will to resist."⁸⁷ The article even added that reliance on spiritual power was merely a contingency for ill-equipped forces.⁸⁸ Although the new Northwest Army manual stressed the importance of cooperation between different branches of the army and of delegation to junior and noncommissioned officers at the company, platoon, and squad levels, its attitudes towards firepower were somewhat different from the new Japanese manual that was put in use in 1928.⁸⁹ Both manuals encouraged their readers to get close to the enemy, but the new Northeast manual added that "firefight is our primary means to eliminate the fighting power of the enemy." It also stipulated that troops should be dispersed as much as possible during firefights in order to minimize casualties.⁹⁰ This clearly shows its preference for firefights over hand-to-hand combat in infantry tactics.

The intellectual officers and the journals also pushed forward changes in equipment and training. In response to the demands of the Northeast Army officers for more support weapons for infantry units, the guards regiment of the headquarters of the Northeast Army was reorganized into a force of four infantry companies, supported by four squadrons of cavalry and companies of machine guns, light and heavy mortars, and infantry guns.⁹¹ The Northeast Army also decided to substantially increase the firepower of the infantry units by providing light machine guns to infantry platoons.⁹² The *NMMA* published the details of the annual Northeast Army exercises in order to allow the officers who did not participate to understand the latest developments in tactics and organization. During these exercises, units were organized into combined arms columns. The infantry was supported by an array of weapons and auxiliary units from machine guns to infantry guns, aircraft, tanks, and engineers. The purpose of these exercises was to test the degree of coordination and communication among different branches of the Northeast Army.⁹³ Although the Japanese invasion cut short the reform drive in the Northeast Army, the intellectual officers in the Northeast Army went on to play a similar role in the NRA. For example, Xu Zhuyi, the chief editor of the *NMMA*, joined the General Staff of the NRA and also taught at the Staff College.⁹⁴ Many instructors from the Northeast Military Academy also served in NRA military academies. The Artillery School of the NRA, established in 1933, was mainly staffed by officers from the Northeast Army. The school also ran a journal along the lines of the *NMMA*.⁹⁵

⁸⁷Ibid., 11.

⁸⁸Ibid., 12.

⁸⁹Ibid., 14–16.

⁹⁰Ibid., 31–33.

⁹¹"Shina gawa guntai no ichibu kaihen" [Reorganization of Part of the Chinese Army], Feb. 17, 1930, in vol. 3 of *Shina gunji kankei zakken dai san kan* [Compilation of Reports on the Chinese Military], Gaimushō kiroku [Documents of the Ministry of Foreign Affairs], Ref. B04010607700, slides 62–63. https://www.jacar.archives.go.jp/aj/meta/image_B04010607700.

⁹²"Hōten ni okeru gunji kaigi" [Military Conference at Fengtian], June 20, 1930, in vol. 3 of *Shina gunji kankei zakken dai san kan* [Compilation of Reports on the Chinese Military], Gaimushō kiroku, Ref. B04010608000, slides 11–13, https://www.jacar.archives.go.jp/aj/meta/image_B04010608000; and "Tōhoku rikugun konsei tabi no genchūchi kyū hensei ni kan suru ken" [Report on the Location and Organization of the Mixed Brigades of the Northeast Army], July 17, 1930, in vol. 3 of *Shina gunji kankei zakken dai san kan* [Compilation of Reports on the Chinese Military], Gaimushō kiroku, Ref. B04010608000, slides 32–33, https://www.jacar.archives.go.jp/aj/meta/image_B04010608000.

⁹³"Yanxi zhidao jihua," 1–16.

⁹⁴Chen Yuhuan, *Lujun daxue*, 765.

⁹⁵*Paobing zazhi* (Artillery Magazine) was published from 1935 to 1937 by the Artillery School in Nanjing.

In the modernization of the NRA between 1928 and 1937, intellectual officers and military journals played a role similar to that seen in the modernization of the Northeast Army. Opinions expressed by the intellectual officers in the journals were sometimes translated into actual NRA reform measures. For example, when the NRA was considering standardizing the caliber of all firearms and artillery, the Munitions Department (*Binggongshu*) consulted the *MMNRA* and other journals. The Munitions Department then decided in 1934 to adopt 7.9 mm as the standard caliber of the rifles, light machine guns, and heavy machine guns used by the NRA.⁹⁶ It also decided not to adopt the medium infantry gun as it was deemed too heavy for the more mobile fighting in China. Instead, 82 mm mortar was adopted. In 1935, the department also designed a 75 mm field gun and a 105 mm howitzer. These could use the same carriage and were lighter than their European and Japanese counterparts. They were seen as more suitable for the less developed roads in China.⁹⁷ Chemical warfare, a subject that received much attention from the intellectual officers, was also one of the reform focuses. Chemical weapons were imported from America, and a chemical weapons factory was established at Gongxian before the Second Sino-Japanese War.⁹⁸

The NRA also introduced mechanization in the way advocated by the intellectual officers. Just as they envisioned, tanks were organized into independent operational units rather than distributed to support the infantry. Tanks and armored cars were bought from abroad to form a mechanized column. By the beginning of the Second Sino-Japanese War, the regiment had 18 Carden-Loyd tankettes, 16 Vickers 6-ton tanks (equipped with 47 mm guns), 16 Vickers amphibious tanks, and 16 German Panzerkampfwagen I light tanks.⁹⁹ Ninety Fiat CV-33 Italian tankettes were also bought before the war but did not arrive until 1938.¹⁰⁰ This effort to build an independent mechanized unit hindered the development of cooperation between infantry and mechanized units. Throughout the 1930s, tanks trained with the infantry on only a handful of occasions. This resulted in a lack of cooperation between tanks and the NRA infantry during the Battle of Shanghai in 1937.

The Nationalist Air Force also received a large amount of new equipment. As bomber advocates were more influential, the Nationalist Air Force focused mainly on bombers instead of the fighter planes recommended by the American advisors. By the beginning of the war, the Nationalist Air Force had 10 squadrons of fighters (114 planes in all), 19 squadrons of light bombers (254 planes), and three squadrons of heavy (twin-engine) bombers (18 planes).¹⁰¹ The battle plan of the air force also reflected the

⁹⁶“Zhishi bingqi zhanshushang yaoqiu zhuyuan zhi yijian” [Opinion on the Tactical Requirements for Standard Weapons], Chen Cheng fuzongtong wenwu [Historical Collection of Vice-President Chen Cheng], Ref. 008-010704-00008-023.

⁹⁷“Yu Dawei cheng binggongshu qidianwu gongfen yepao shigongfen qingliudanpao sheji yu zhizao jihuashu” [Yu Dawei’s Submission to the Armaments Department on the Design and Production Plan for the 7.5 cm Field Gun and the 10 cm Light Howitzer], c. 1935, Binggong shengchan-1 [Production of Munitions-1], Guomin zhengfu dang’an [Documents of the Nationalist Government], Ref. 001-073100-0001.

⁹⁸“Jiang Zhongzheng dian Yu Dawei jingou duqi paijipao paosheqi ji paodan zai linshifeixiang xia bofu” [Chiang Kai-shek’s Telegram to Yu Dawei Permitting the Procurement of Gas Mortars, Launchers, and Bombs Using the Money Drafted from the Temporary Account], c. 1935, Junxie goumai-1 [Procurement of Armaments-1], Guomin zhengfu dang’an, Ref. 001-073201-0001.

⁹⁹Most were captured by the Japanese in Shanghai during the early stage of the war. *Shina heiki yōran*, 148.

¹⁰⁰Sun Jianzhong, *Guojun zhuangjijiang fazhanshi*, 525–530.

¹⁰¹Andersson, *A History of Chinese Aviation*, 128.

offensive approach advocated by the intellectual officers. According to the war plan of 1937, the air force was expected to eliminate the Japanese gunboats along both the Yangtze and the Pearl Rivers. After that, it was to destroy the Japanese fleet (and aircraft carriers) approaching the Chinese coast and then attack naval bases and arsenals in Japan. Ground attacks and close air support for land forces were seen as secondary missions.¹⁰² When war broke out, the Nationalist Air Force simply could not accomplish even the first phase of the plan.¹⁰³ However, the plan reflected the NRA intellectual officers' confidence in their air force and in air power in general.

The military journals of the NRA were also used by the authorities to disseminate the official view and suppress dissension. The most obvious example was the use of the journals to introduce the new infantry tactical manual to the NRA officers. The introduction of the new manual led to a controversy between the German and Japanese schools in the NRA training institutions. The former was led by German-trained instructors at the Central Military Academy and supported by the German advisors, while the latter was led by the instructors at the Infantry School (*Bubing xuexiao*) who were trained in Japan and backed by the committee appointed by the Inspector General of Training to review the manuals.¹⁰⁴ Initially, Chiang Kai-shek opted for a complete adoption of the German manual and entrusted the Central Military Academy to translate it.¹⁰⁵ The leader of the German advisors, General Georg Wetzell, supported this decision.¹⁰⁶ This move was opposed by Wang Jun, the head of the Infantry School, who voiced his opposition in the *Infantry Magazine* (*Bubing zazhi*). In an article introducing the newly imported German infantry gun, Wang suggested that foreign equipment and training might not be useful in China.¹⁰⁷ Wang and the instructors at the Infantry School even went so far as to draft an alternative manual. They eventually won the support of Chiang Kai-shek by emphasizing the Three People's Principles in the introduction to the alternative manual – and Chiang then claimed the introduction as his own work.¹⁰⁸

In early 1937, the Infantry School version became the official manual and the *MMNRA* published a special issue on the training manual to sell it to the NRA officers. The first article was written by Zhou Yawei, who by then was the Deputy Inspector General of Training. He urged officers to follow the new manual faithfully “like an actor with his script.”¹⁰⁹ In another article, Wang Jun suggested that officers should not question the new manual as it was a “truly Chinese work” endorsed by Chiang, who claimed to have written the introduction.¹¹⁰ If one found a problem with

¹⁰²Ma Zhendu, “Guomindang zhengfu yijiusanqi niandu guofang zuozhan jihua (Jia an)”; and Ma Zhendu, “Guomindang zhengfu yijiusanqi niandu guofang zuozhan jihua (Yi an).”

¹⁰³Guo Daijun, *Chongtan kangzhan shi*, 300–324.

¹⁰⁴Wu Xiqi, “Guomindang tongzhi shiqi bubingxuexiao,” 581.

¹⁰⁵“Zhou Yawei zhi Jiang Jieshi xin” [Letter to Chiang Kai-shek from Zhou Yawei], c. 1932, Jiang Zhongzheng zongtong wenwu [Historical Collection of President Chiang Kai-shek], Ref. 002–090102–00001–020.

¹⁰⁶“Fo Saier zhi Jiang Jieshi han” [Letter to Chiang Kai-shek from Wetzell], c. 1933, Jiang Zhongzheng zongtong wenwu, Ref. 002–090102–00004–110.

¹⁰⁷Wang Jun, “Canguan deguo xinbingqi,” 8.

¹⁰⁸Wu Xiqi, “Guomindang tongzhi shiqi bubingxuexiao,” 582. This became the official version of the infantry training manual. See *Bubing caodian xin cao'an*.

¹⁰⁹Zhou Yawei, “Dianfanling yu jianjun,” 2.

¹¹⁰Wang Jun, “Jiujing na yiben bubing caodian,” 5.

the manual, Zhang Huaifu, the Inspector General of the Infantry suggested, the proper course would be to approach one's senior officer and give feedback instead of discussing it privately or ignoring the manual.¹¹¹ The special issue then explained the differences between the new manual and the older versions, as well as the ones used by the Japanese and German armies. It also published reports on the experience of using the training manual by units such as National Salt Gabelle Brigade (*Shuijing zongtuan*).¹¹²

Conclusion

This article suggests that the professional military journals allow us to appreciate the intellectual capability of some of the intellectual Chinese officers during the 1930s and the difficulties they faced as they attempted to introduce and develop modern military science in China. At least in the Fengtian or Northeast Army and the National Revolutionary Army, there existed small groups of intellectual officers with the requisite linguistic and technical capability to understand and discuss modern military matters. They shared this knowledge with their less well-educated colleagues through journals. These journals contained not only translations of foreign (especially Japanese) military works, but also original articles written by officers who thought differently from their European and Japanese counterparts. Some of these journals were elaborately organized and were run along the lines of professional journals in the more advanced countries. The journals served as a means to keep Chinese officers informed of the latest military developments from around the world and were also used as tools to ensure uniformity in training, understanding of tactics, and use of equipment. Sometimes, the journals also served as channels for officers to voice their opinions and even their dissent. To a certain extent, this academic dimension of the Chinese military helped the Chinese armies to better adapt to modern warfare, at least during the 1930s. A close look at the articles published at this time reveals that the intellectual Chinese officers of the Northeast Army and the NRA paid some attention to the Chinese context when they were trying to create a modern military force. On the other hand, they also had too much faith in technology and in the doctrine of decisive battle, a trait shared by many intellectual officers around the world at that time. In some areas, such as the introduction of mechanization and development of an air force, this hindered their efforts to make full use of limited resources to build a more effective army and air force before the outbreak of the Second Sino-Japanese War.

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¹¹¹Zhang Huaifu, "Dianfanling yu jundui jiaoyu," 3.

¹¹²Wang Xiaoli, "Bubingban zhandou jiaolian," 173–178.

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Glossary

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| Baoding junguan xuexiao | 保定軍官學校 |
| Binggongshu | 兵工署 |
| Bubing xuexiao | 步兵學校 |
| <i>Bubing zazhi</i> | 《步兵雜誌》 |
| diao cha | 調查 |
| Dongbei bianfangjun | 東北邊防軍 |
| Dongbeijun | 東北軍 |
| <i>Dongbei junshi yuekan</i> | 《東北軍事月刊》 |
| Dongsansheng baoansilingbu junlingting | 東三省保安司令部軍令廳 |
| duduan shiying qingkuang zhi jingshen | 獨斷適應情況之精神 |
| faling | 法令 |
| Fuzhou wubei xuetang | 福州武備學堂 |
| <i>Guofang xinlun</i> | 《國防新論》 |
| <i>Guomin gemingjun junshi zazhi</i> | 《國民革命軍軍事雜誌》 |
| Guomin gemingjun | 國民革命軍 |
| huaxiang | 畫像 |
| lunshuo | 論說 |
| Jiaodao zongdui | 教導總隊 |
| Jiaozi xuexiao | 交輜學校 |
| Jiguanqiang hutong | 機關槍胡同 |
| <i>Jingshen yuekan</i> | 《精神月刊》 |
| Junguantuan | 軍官團 |
| Junshi canyiyuan | 軍事參議院 |
| <i>Junshi yuekan</i> | 《軍事月刊》 |
| Junxuesi | 軍學司 |
| Junzhengbu | 軍政部 |
| <i>Kaikōsha kiji</i> | 《偕行社記事》 |
| <i>Luda yuekan</i> | 《陸大月刊》 |
| Lujun daxue | 陸軍大學 |
| Lujun daxuetang | 陸軍大學堂 |
| Lujun xuetang | 陸軍學堂 |
| mingling | 命令 |
| mouding er houdong | 謀定而後動 |
| <i>Ouzhou zhanzheng jixi zhanfa shiqi zhi zhanshu guan cha</i> | 《歐洲戰爭急襲戰法時期之戰術觀察》 |
| roudan zhanshu | 肉彈戰術 |
| <i>Sentō kōyō</i> | 《戰鬪綱要》 |
| shezhang | 社長 |
| Shuijing zongtuan | 稅警總團 |
| Tongmenghui | 同盟會 |
| tongxun | 通訊 |
| tuhua | 圖畫 |

Wubei zazhi
xinwen
xiuca
xueshu
Xunlian zongjianbu
Xunlian zongjianbu fujian
yishu
yizhu
yiyi dailao
Yunnan wubei xuetang
Zajian
zhanshu
Zhenwu xuexiao
zongbianji

《武備雜誌》
新聞
秀才
學術
訓練總監部
訓練總監部副監
譯述
譯著
以逸待勞
雲南武備學堂
雜件
戰術
振武學校
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