

THE PLA'S EVOLVING OUTLOOK ON URBAN WARFARE: LEARNING, TRAINING, AND IMPLICATIONS FOR TAIWAN

共軍城鎮戰演變與展望： 學習、訓練及對臺之意涵

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因本刊篇幅有限，已獲作者同意重複性內文如摘要及本文不予翻譯，尾註部分請參考原文出處，本文謹作翻譯內文，提供讀者參考，另未經授權，嚴禁使用文章內任何圖片及文字。

This report explores the PLA's history with urban warfare and considers several lessons from the PLA's study of other militaries' operations. Our analysis examines the PLA's outlook on new technologies and emerging capabilities for future urban warfare, discusses several relevant weapon systems and capabilities that the PLA is pursuing, and evaluates the training and recent exercises through which the PLA is seeking to improve its proficiency in urban warfare. This report concludes by raising questions for future research and includes several recommendations and considerations for US and Taiwanese policy responses. The US military can look to leverage lessons learned from its conflicts over the past twenty years and explore options to contribute to Taiwan's capabilities for robust defense and resistance within its cities. The PLA's progress in preparing for urban warfare will merit continued analytic attention; an



improved understanding of these dynamics could inform US and Taiwanese initiatives to bolster deterrence.

本報告藉探討共軍城鎮戰歷史及自他國作戰得來之經驗教訓，分析其面對未來城鎮作戰所需之新技術與能力，並研析城鎮作戰能力與近期演習的訓練能量，評估共軍刻正探索改進其城鎮戰專業之相關武器系統與能力。本報告包含就未來研究提出命題，含括對美、臺政策因應之建議與考量。美軍可利用過往20年在衝突中吸取之教訓，提出各種可能選項，增強協防臺灣因應城鎮作戰及抵抗能力之建議。共軍在整備城鎮戰之進展殊值關注及分析，故對中共轉變的深入理解，可為美臺應對威懾提供相對性敵情。

Cities have been decisive battlefields throughout history. The loss or capture of a strategically significant city often heralds a major shift in the balance between a war's combatants. During the Chinese Civil War, the Red Army, the precursor to the modern Chinese People's Liberation Army (PLA), seized the initiative against the military forces of the Nationalists or GUOMINDANG (KMT) in several decisive urban battles. Those victories contributed to the ultimate victory of the Chinese Communist Party (CCP). In an era of dramatic and accelerating urbanization, militaries worldwide are concerned with and preparing for battles waged on urban terrain.

自古以來，城鎮一直是決定性的戰場。一旦失去或占領一個戰略要點城鎮的得失，往往預示交戰雙方之間作戰態勢的重大轉變。國共內戰期間，紅軍(共軍前身)在幾次決定性城鎮戰中，奪取對抗國軍(國民黨)之主動權，這些勝利對中國共產黨最終勝利厥功甚偉。在一個加速城鎮化作戰的時代，全球軍隊都在關注並準備在城鎮地形中之戰鬥。

In more-ancient history, battles over cities often hinged upon the strength of their fortifications, which allowed for a defensive advantage in battles that date back to the Song and Yuan dynasties. The siege and capture of Kaifeng, the capital of the Northern Song dynasty, in 1126 BCE was an inflection point of the era and marked milestone in military technology as one of the earliest instances of gunpowder being used in warfare. Centuries thereafter, Qing dynasty campaigns to suppress the Taiping rebellion featured the introduction of modern firearms, as well as cannons, which improved the dynasty's firepower and enabled its forces to overcome rebel defenses. During World War II, campaigns targeting major cities, including Shanghai, involved modern airpower and had devastating impacts on civilian populations.

古代爭奪城鎮的戰鬥往往取決於防禦工事的強度，這可追溯到宋、元朝時期。西元前1126年，圍攻北宋都城開封是轉折點，亦是軍事技術里程碑，為最早將火藥用於戰爭的例子之一。過了幾個世紀，清朝鎮壓太平天國叛亂的戰役，引入現代火器和大砲，提高火力，使其部隊能克服叛軍防禦。在第二次世界大戰期間，運用現代制空權戰役對大城，如上海的平民損傷造成毀滅性影響。

The Chinese Civil War 國共內戰

The founding of the Red Army was the outcome of a military action centered upon a city: the Nanchang Uprising on August 1, 1927, a date commemorated by the PLA to this day. The Nanchang Uprising occurred through subversion: Nationalist units that had secretly joined with

the Communists revealed their true allegiance, taking control of Nanchang with approximately 30,000 troops. However, this first CCP soviet was short-lived and collapsed three days later. In the next month, the CCP captured the port city of Swatow, but their forces were forced to flee after occupying it for only six days. At that point, deaths and desertions had reduced the force by nearly two-thirds; their numbers continued to diminish. As the civil war continued, the Red Army would be forced to confront its shortcomings as a force that favored guerilla warfare and failed repeatedly to win critical battles on vital urban terrain. From 1927-1930, the Red Army was often reduced to raiding urban areas to kill local leaders and looting to gain supplies, behavior at odds with efforts to win support in urban areas. The CCP's major issues during its first few years of military activity included poor support from the local populace and the lack of an organizational structure capable of managing urban operations. These early urban debacles contributed to a shift in the CCP's focus to rural areas and the peasantry, a shift overseen by Mao Zedong.

紅軍成立是為了城鎮作戰：如1927年8月1日通過推翻政權的南昌起義。秘密加入共產黨的國民黨部隊顯露其忠誠，以中華蘇維埃共和國之名約3萬兵力控制南昌，然此第一個中共蘇維埃政權三天後即垮台。接下來一個月裡，中共占領港口城鎮汕頭，但僅六天後部隊就被迫逃離。當時，死亡和逃兵造成部隊減員仍有增無減近三分之二；隨內戰持續，紅軍被迫正視自己在重要城鎮戰場多次未能贏得關鍵戰役的缺點。從1927到1930年，紅軍淪落為突襲城鎮地區，殺害當地領導人，靠搶劫獲取補給，然而倒行逆施無法贏得城鎮地區支持。中共在其軍事活動初期，主要問題包括缺乏當地群眾支持及管理城鎮作戰機制，早期於城鎮戰之失利迫使毛澤東轉向重視農村和農民。

The CCP's eventual remedying of its urban warfare shortcomings was critical to its later triumph over the KMT. When the Chinese Civil War reignited after the conclusion of World War II, while the United States attempted to negotiate a peace deal and coalition government between the two combatants, the CCP attempted to achieve an advantage in negotiations through success on the battlefield. This strategy, which involved assaulting towns and cities that were Nationalist strongholds, achieved only limited success. Realizing the necessity of adaptation, the Red Army in China's northeast was forced to become an "army of learning," as one prominent historian of the era characterized its efforts at the time.

中共彌補其城鎮戰之缺陷，是最終戰勝國民黨之關鍵。當國共內戰在二戰結束後重起，美國試圖通過談判達成國共兩黨和平協議及組成聯合政府，但共產黨卻企圖以勝戰，包括襲擊國民黨城鎮據點，獲取談判優勢，惟成效有限。當時一著名歷史學家說：「部署東北的紅軍，意識到變革之必要，被迫成為一支『學習型軍隊』。」

The Red Army pursued new initiatives in training that improved its ability to take and hold cities. For example, under the leadership of Lin Biao, one of the Chinese Communists' top military leaders, a number of the CCP's military schools combined to create a military academy that also conducted research. Lin Biao's headquarters drew up tactical principles for urban warfare while bringing in experienced officers to discuss and analyze prior battles to inform training. Lin Biao's forces in the northeast engaged in extensive training that used already-captured urban areas as



de FACTO training facilities. These efforts improved their ability to construct defensive works, demolish enemy emplacements, and, perhaps most importantly, operate as small units. The Red Army changed the structure, composition, and employment of small units, which enabled its shift from the crude tactic of flooding an area with troops to a more targeted approach that focused on key zones in a city and concentrated on envelopment and outflanking.

紅軍尋求新的訓練方式以提高占領和控制城鎮的能力。舉例來說：共產黨最高軍事領導人之一林彪，在其領導下整併多所軍事學校，成立一所軍事學院並遂行結合研究工作。林彪總部制定城鎮作戰戰術原則，同時聘請經驗豐富的軍官討論和分析過往城鎮戰作戰經驗，為訓練提供教材。林彪率領的東北紅軍進行密集訓練，利用已占領的城鎮作為「現成」訓練設施、提高建造防禦工事及摧毀敵人陣地之能力，最重要的是化整為零。紅軍改變小部隊架構、編組和部署運用，這使得它能夠從人海作戰的粗糙戰術，轉變為聚焦城鎮區域之關鍵作戰區域，著重包圍和迂迴。

Ultimately, dedicated military learning contributed to the CCP's success in a series of battles and campaigns that would secure the northeast, including its major cities. The "liberation" of Shijiazhuang in November 1947, for example, was praised by then-Commander-in-Chief Zhu De as "the first example of the capture of a big city," enabled by concentrating superior forces to "disintegrate" the enemy's defenses. Early in these learning efforts, the Red Army in the northeast had learned to attack cities to draw out reinforcements that could be assaulted while vulnerable in transit. This approach would be later employed in the 1948 Battle of Jinan.

終於，專精的軍事學習幫助中共在一連串戰役中取得勝利，奪取東北地區及其大城鎮。當時的總司令朱德譽稱讚1947年11月「解放」石家莊即是「攻占大城鎮之先例」，集中優勢力量「瓦解」敵人防禦。東北紅軍經過早期努力已學會攻擊城鎮以吸引在運輸途中易受攻擊的增援部隊，以此戰術故技重施於1948年濟南戰役。

The Battle of Jinan has received considerable attention in China in recent years, especially in CCP references invoking this historical memory. The CCP's victory at the Battle of Jinan in September 1948 is said to have been a critical inflection point in its drive to seize control of the region. The PLA's continued discussion of this battle, which has been more obscure in foreign research, demonstrates that the battle's recorded lessons and legacies are believed to possess contemporary relevance. The Battle of Jinan was described as a milestone that marked "a new era of permanent occupation of large cities and unification of large-scale liberated areas," according to Su Yu, acting commander and political commissar of the East China Field Army. This battle allowed the CCP to take a city "with heavy defenses and strong fortifications," by "attacking Jinan and striking at its reinforcements". According to General Xu Shiyu, the victory at Jinan leveraged the "bull knife tactic", described as follows:

濟南戰役近年來在中國引起相當關注，特別是中共引用這段歷史的文獻。中共認為1948年9月的濟南戰役是奪取該地區勝利的關鍵轉折點，雖然國外文獻甚少著墨，但共軍持續探討此戰役，證明其遺留的歷史教訓格外具有當代意義。濟南戰役被說成「永久占領大城市及大規模統一解放區」的新時代。華東野戰軍副司令員兼代政委粟裕說：「此戰讓中

共通過『圍點打援』奪取一座『防禦嚴密及工事堅固』城市。」據許世友將軍表述，濟南的勝利即是運用了直插敵人心臟的「牛刀子戰術」，描述如下：

Beyond brute force, the CCP's success also came from the use of CCP sympathizers in Jinan. Underground organizers mobilized operatives to provide intelligence on fortifications and the positioning of KMT troops in the city. Jinan was the first major city south of the Great Wall to be captured and permanently occupied by the CCP. To commemorate this victory, the Central Military Commission (CMC) awarded the titles "Jinan First Regiment" to the 73rd Regiment and "Jinan Second Regiment" to the 109th Regiment. These names and flags are used to this day; the successors to these units are now elements of the Eastern Theater Command, the "war zone" that would oversee a potential invasion of Taiwan. Today, the Jinan First Regiment is the honorary designation of a heavy synthetic brigade of the 71st Group Army, headquartered at Xuzhou in Jiangsu Province, while the Jinan Second Regiment today is within the 73rd Group Army, which is headquartered at Zhangzhou, Fujian. Today, as Xi Jinping considers concluding the Chinese Civil War through forced "unification," those forces are focused on that contingency and have engaged in major training exercises focused on urban warfare as an element of China's coercive signaling.

中共的成功除了純武之外，還有來自濟南的共產黨同情者，像是地下組織者動員特工提供防禦工事和國民黨軍隊在該市部署的情報。濟南是長城以南第一個被中共占領後永久擁有的主要城市，為紀念這一勝利，中央軍委授予第73團「濟南第一團」及第109團為「濟南第二團」。這些稱號和旗幟一直沿用至今；繼任部隊現在是負責對臺攻擊東部戰區的一員。現今，濟南第一團是第71集團軍重型合成旅的榮譽稱號，旅部位於江蘇省徐州，而今天的濟南第二團隸屬於第73集團軍，軍部設在福建漳州。如今，在習近平考慮透過武力「統一」臺灣，終結國共內戰之際，這些部隊專注於此類應急作戰，並展開以城鎮戰為重點的大型演訓，作為中國脅迫之信號。

The Red Army's improved proficiency in urban warfare contributed to a series of victories that shifted the balance in the Chinese Civil War. The Battle of Jinan was a prelude to three major campaigns that destroyed or captured a critical mass of the Nationalists' best troops. The Liaoshen (Liaoning-Shenyang) campaign that occurred September to November 1948 was the largest military offensive undertaken by the PLA or Red Army up to that point and primarily targeted the Nationalist-held cities of Jinzhou and Shenyang (Mukden). While their urban warfare capabilities had improved considerably since their early days, these capabilities were still maturing. When failing to seize cities quickly and effectively, CCP forces sometimes became tied down in sieges that were often costly in terms of civilian casualties and popular support. During the Liaoshen Campaign, in the infamous siege of Changchun, the Red Army was ordered to "turn Changchun into a city of death." CCP forces prevented starving civilians from leaving to put further pressure on KMT supplies.

紅軍對城鎮戰的精進，帶來一連串的勝利，使國共內戰雙邊戰力失衡。濟南會戰敲響三次重大戰役的前奏，此三戰摧毀或俘虜國民黨最精銳的軍隊。遼瀋(遼寧—瀋陽)戰役發生在1948年9月至11月，是當時共軍或紅軍進行的最大規模軍事攻勢，主要針對國民黨控



制的錦州和瀋陽(奉天)城市。儘管紅軍城鎮作戰能力從早期有所提升且日益成熟，由於未能迅速有效奪取城市，中共軍隊有時會陷入圍攻之中，而這些圍攻往往以平民傷亡和民眾支持為代價。遼瀋會戰期間，在包圍長春的行動中，紅軍奉命「把長春變成死亡之城」，共產黨軍隊阻止饑餓的平民離開，進一步對國民黨物資供應施加壓力。

By the time the siege concluded in October 1948, an estimated 150,000 to 300,000 civilians had died as a result of these policies. The Huaihai Campaign, which occurred from November 1948 to January 1949, is the historic campaign that assured Communist victory in the Chinese Civil War. The Huaihai Campaign focused on the Nationalist headquarters at Xuzhou and was the largest military engagement at the time since World War II. The PLA encircled Xuzhou and then used artillery to target the Nationalist troops and civilians fleeing the city on clogged roads. The PLA remembers the Huaihai Campaign for demonstrating the power of "people's warfare," as thousands of citizens mobilized to provide logistical support to the PLA, often pushing trolleys with supplies. When Xi Jinping visited the Huaihai memorial in 2017, he remarked: "[the victory] relied on the support and dedication of the people. The Battle of Huaihai was a victory achieved through the launch of trolleys." That mythos of people's warfare persists and continues to be invoked in China today, including as the PLA looks to leverage a strategy of military-civil fusion and mobilize civil and commercial assets, such as ferries, that could provide transport and logistics support should the PLA invade Taiwan.

到 1948 年 10 月圍攻結束時，估計有 15 至 30 萬名平民因此政策死亡。1948 年 11 月至 1949 年 1 月的淮海戰役(徐蚌會戰)，是共產黨在國共內戰中取得勝利的歷史性戰役，此戰集中在徐州的國民黨總部，是自第二次世界大戰以來當時最大的會戰。共軍包圍徐州，以大砲瞄準堵塞道路上逃離城鎮的國民黨軍隊和平民，徐蚌會戰展示「人民戰爭」的威力，成千上萬的市民皆動員起來，推著運載物資的手推車為共軍提供後勤支援。2017 年習近平在參觀淮海紀念館時表示：「勝利靠的是人民的支持和奉獻。淮海戰役，是推手推車的勝利。」此種人民戰爭的傳說現今依然存在並持續在中國傳頌，共軍希望戰時利用軍民融合，動員民用及商業資產，例如渡輪，以在共軍侵略臺灣時提供運輸和後勤支援。

As CCP forces conquered more territory, the PLA refined its approach to operations against urban areas, as seen with the captures of Beijing (then known as Beiping) and Tianjin in the Pingjin Campaign. Whereas Tianjin was captured by force in January 1949, the fall of Beijing was touted as an ideal instance of "peaceful liberation," in which the CCP's "magic weapons" of united front work (i.e., attempting to co-opt potential sympathizers and cultivating relationships with other groups that could be exploited for influence) and party-building (i.e., recruiting and developing more robust membership and organization for the CCP) were more significant than military power alone. Mao Zedong declared that the conquest of these two cities would represent thereafter a model for the CCP's conquest of cities, known as the "Tianjin pattern" and the "Beiping pattern," in which the former emphasized conquest primarily through military force and the latter success through subversion and exploitation of influence. In each case, the CCP concentrated on the practice of "political work," in which the CCP sought to cultivate allies on the inside—particularly

students and Nationalist troops and officers—who could be organized as guides and gather intelligence on Nationalist forces or city defenses. In Beijing, successful subversion, including the turning of the chief of the Nationalist defenders, as the ultimate guarantor of success.

當中共占領更多土地之際，共軍精進其城鎮作戰方式，如平津戰役中占領北京(當時稱為北平)和天津。天津於 1949 年 1 月被占領，而北京的淪陷則被吹捧為「和平解放」的理想例證，其中中共統一戰線(即試圖拉攏潛在的支持者並與具影響力的團體建立關係)和建黨的建設(即為中共招募和發展更強大的成員和組織)法寶比單純的軍事力量更重要。毛澤東宣稱，征服這兩個城市將是爾後中共城鎮戰的模式，即所謂的「天津模式」和「北平模式」，前者強調以武力征服，後者強調通過推翻和利用影響力征服。在各種情況下，中共都注重於「政治工作」的實踐，試圖在內部培養盟友，特別是學生、國民黨部隊和軍官，他們可被編組為嚮導，蒐集關於國民黨軍隊或城鎮的防禦情報，中共在北京成功的顛覆國民黨守軍首領，是最終成功的保證。

The battle and capture of Shanghai in May 1949 was another notable engagement that highlighted the CCP's evolving view of urban warfare and struggle. The fight for Shanghai was "not only a military battle but also an excellent political battle; it is necessary not only to destroy the enemy but also preserve the city and also win the hearts of the people," Mao Zedong declared at the time. Shanghai possessed robust defenses and symbolic significance as a cosmopolitan and international city. As Marshal Chen Yi, who later served as mayor of Shanghai, said vividly: "The Battle of Shanghai can be aptly compared to battling rats in a china shop; you must catch the rats and must not break the precious porcelain." To that end, the PLA displayed discipline upon entering the city, which was praised by CCP leaders at the time and is recalled in modern remembrances of the battle, which is also described as a "miracle."

1949 年 5 月的上海戰役是另一個值得注意的交戰模式，它突顯中共持續演進城鎮作戰和鬥爭。毛澤東當時宣稱，上海之戰「非僅是一場軍事戰役，且為一場精彩政治戰役；既要消滅敵人，又要保衛城市，且要贏得民心。」作為國際化大都市，上海擁有強大的防禦和象徵意義。陳毅元帥，後任上海市市長，生動地說：「上海之戰好比在瓷器店裡打老鼠；一定要抓老鼠，不要打碎珍貴的瓷器。」為此，共軍進城紀律嚴明，為當時的中共領導人所稱頌，為現代戰爭歷史所銘記，也被稱為「奇蹟」。

The PLA's years of learning through fighting in urban combat played a critical role in the CCP's eventual victory in the civil war. This early history, often overlooked beyond China, possesses continued salience in CCP and PLA thinking in ways that may impact its outlook on contemporary challenges and goals. The CCP viewed its efforts in "wartime political work," which traditionally concentrated on "disintegrating the enemy force" as critical to its success. This strategy is still relevant and has been used to target Taiwan with attempts to undermine its democratic institutions and compromise its political and military leaders. During the Chinese Civil War, the cultivation of intelligence assets among the enemy and the local population helped the CCP tighten its control of cities taken by the PLA. The CCP's methods for controlling a society in a post-conflict scenario—for example, Taiwan—could be inspired by China's civil war legacies. The



PLA's history of urban warfare is often mythologized in contemporary recounting, but important lessons may prove to be selective, forgotten, or distorted over the decades since.

共軍在城鎮戰的多年學習，對中共最終在內戰中取得勝利起關鍵作用。這段常被忽視的早期歷史，在中共和共軍思維中仍具顯著地位，可能會影響其對當代挑戰和目標的看法。中共認為，「戰時政治工作」的努力，傳統上集中在「瓦解敵軍」，對其成功至關重要，此一戰略仍具現實意義，並被用來打擊臺灣，企圖破壞民主體制，損害其政治和軍事領導人。在國共內戰期間，中共在敵軍和當地居民中培養情報資源，有助加強對占領城鎮區之控制，在後衝突時期，中共控制社會(如臺灣)的方式或受到國共內戰啟發。共軍的城市戰爭歷史在當代的敘述中經常被神話化，但重要的教訓可能被證明是選擇性的，被遺忘的，或者在那之後的幾十年裡被扭曲。

In the People's Republic of China (PRC), politics and ideology have a history of undercutting military adaptation. The CCP's ability to leverage lessons learned from its critical campaigns, for example during the Chinese Civil War, has at times been undercut by factional struggles that took down integral figures involved, infamously including Lin Biao. As a result, his contributions were diminished or effectively erased from official history for decades. Ultimately, politics impacts what lessons the CCP and its forces may draw from its history, and that continues to be the case in Xi Jinping's new era. So too, ideology may influence the parallels and analogies that arise in China, as elements of history are retold and recounted in propaganda.

在中國，政治和意識形態會削弱軍事之適應性。中共利用從其關鍵戰役中吸取經驗教訓的能力，例如在國共內戰期間，有時會被派系鬥爭削弱，這些派系鬥爭打倒了包括林彪在內的重要人物。幾十年後他的貢獻被削減或實際上從官方歷史被抹去。歸根究底，政治會影響中共從歷史吸取教訓的能力，在習近平的時代，情況依舊。

The PRC 1979 Invasion of Vietnam 1979年中共入侵越南

China's invasion of Vietnam in 1979 and the border skirmishes during the decade thereafter are generally considered to be the PLA's most recent experience of warfare. While the battles were fought primarily within Vietnam's jungles, urban warfare was also an important component of the conflict. During the invasion, the PLA conquered 17 district towns and the capital cities of three provinces. The provincial capital of Lang Son lay on a route used by past Chinese empires invading Vietnam and was the PLA's primary target. In the assault on Lang Son, the PLA first captured the three mountains and a key hill surrounding it-the city's primary defensive elements-before beginning an assault on the city itself.

中共於1979年入侵越南造成十年後的邊境衝突餘波不斷，成為共軍最近期的作戰經歷。雖然戰爭主要在越南的叢林中進行，但城鎮戰也是衝突的重要組成部分。共軍在入侵期間，征服17個區鄉鎮和3個省的省會城鎮。省會諒山市位於過去中國入侵越南路線上，是共軍主要目標。在對諒山的進攻中，共軍首先占領三座山脈和圍繞它的一座重要山丘(這座城鎮的主要防禦要塞)，然後才開始進攻此城。

Unlike in many of its assaults on cities during the Chinese Civil War, the PLA did not

prioritize limiting civilian casualties or destruction of infrastructure in Lang Son. The assault on Lang Son started with a large-scale artillery barrage; in the words of the PLA commander, the intention was to "raze every house in Lang Son." After entering the city, PLA troops initially captured government buildings and nearby heights, which allowed for improved intelligence in support of artillery strikes. The Vietnamese forces operating from close defensive works, such as the city's caves, were eliminated with gasoline, flamethrowers, and explosives. When the PLA later withdrew from Lang Son, its 55TH Army destroyed thousands of military and public facilities, reportedly reducing much of the city to ruins. The PLA looted what was not destroyed and reportedly repeated this same pattern of deliberate damage and looting against other urban areas it assaulted in Vietnam. The overall impact of this destruction was reported to have badly impacted Vietnam's economy for the next 15 years. The PLA later called this destruction a "goodbye kiss" for the country. China's goal had been to "teach Vietnam a lesson," and any concern for collateral damage or damage limitation was quickly abandoned.

與國共內戰期間對城鎮的許多突擊不同，共軍沒有優先考慮限制平民傷亡或對諒山基礎設施的破壞。對諒山的進攻從大規模的砲擊開始，用其指揮官的話來說，目的是「夷平諒山的每一棟房子」。進入該市後，共軍最初占領政府大樓和附近的高地，從而獲得情資實施砲擊。在防空洞等近距離防禦工事中行動的越南軍隊，被汽油、火焰噴射器和炸藥消滅。當從諒山撤出時，第55集團軍摧毀無數的軍事和公共設施，據報導，這座城鎮的大部分地區被夷為平地，共軍洗劫沒有被摧毀的東西，在越南其他城鎮重複同樣的蓄意破壞和搶劫模式，嚴重影響接下來15年越南的經濟。共軍後來將這次破壞稱為給越南的「告別之吻」。中國的目標是「給越南一個教訓」，任何對附帶傷害或損害限制的考量很快就被忽視。

The PLA tends to remember its invasion of Vietnam as relatively successful because the outcome was consistent with its political objective: to impose punishment. By contrast, the accounts of foreign analysts typically concentrate on the PLA's difficulty in conducting the operation, even so close to China's borders, as well as the PLA's high number of casualties. The difficulties inherent to urban warfare, including distinguishing combatants from civilians, appeared to produce frustration among PLA forces, which manifested in reports of the PLA shooting prisoners and reportedly killing civilians. The PLA's punitive approach was intended to devastate important urban areas. Such conduct, as well as accounts of violence targeting noncombatants, adversely impacted the Vietnamese public's view of the PLA, contributing to an intense hatred toward China that persisted for decades. The PLA has since highlighted the importance of avoiding collateral damage in its discourse on and training for urban warfare, but discipline and adherence to norms of professional conduct can break down despite-or because of-political education and indoctrination.

共軍記載傾向於越南入侵行動是相當成功的，與其政治目標一致：施加懲罰。即便是在如此靠近中國邊境的地方，相比之下，國外分析的報導通常聚焦在共軍執行作戰的窒礙上，以及高傷亡人數。城鎮戰固有的困難，包括區分戰鬥人員和平民，似乎在共軍部隊中產生了挫敗感，這體現在共軍射殺俘虜和殺害平民的報導中。共軍的懲罰性作法旨在摧



毀重要城市地區，這種行為及針對非戰鬥人員的暴行，使越南民眾對共軍觀點產生不利影響，導致對中國的強烈仇恨持續數十年。此後，共軍在其關於城鎮戰的討論和訓練中，強調避免波及無辜的重要性，但儘管或囿因於政治教育和灌輸，紀律及對行為的規範可能會崩壞。

PLA Perspectives on Urban Warfare 共軍對城鎮戰的看法

The PLA's outlook on future conflict in cities has reflected lessons learned from the study of more recent foreign battles, especially by the United States and Russia, occurring between the 1990s through the early 2020s in cities ranging from Grozny and Mogadishu to Kabul and Fallujah. The PLA has systematically examined the conduct of major battles to evaluate the form and changing features of modern warfare. The PLA's assessments of these operations range from accurate to relatively idiosyncratic. Often, the PLA's analysis and assessments of future urban warfare cite and display the influence of close reading of US doctrine, as well as debates among American specialists. For that reason, the PLA's outlook on urban warfare could be characterized as relatively consistent with or even imitative of mainstream thinking in the United States. However, PLA efforts to study urban warfare, occurring without firsthand experience of combat, may not recognize the full extent of the challenges that arise within the fog and frictions of an active urban battlefield.

共軍不斷從國外城鎮戰史吸取教訓，特別是美國和俄羅斯在1990年至2020年代初期，在格羅茲尼和摩加迪休、喀布爾和法魯加等城鎮的戰爭。共軍系統性地考察重大戰役開展情況，以評估現代戰爭形式和變化之特徵。共軍對此行動評估範圍從準確到相對特殊。共軍對未來城鎮戰的分析和評估經常引用、展示對美軍準則詳盡研究及對美國專家間辯論的影響。正因如此，共軍的城鎮戰觀點可說是比較符合甚至模仿美國主流思想。然而，共軍在沒有作戰經驗的情況下，研究城鎮戰可能沒有充分認識到其中所產生的挑戰。

A review of the available literature illuminates several notable features that have arisen in a selection of writings by PLA analysts, including on the utility of intelligence, information attacks, precision strikes, close combat and mobility, hybridity and integration of forces, and morale and public opinion. Even from afar, the PLA has recognized the need for fundamental improvements in its capabilities for urban warfare given these contemporary challenges.

從現有文獻的回顧闡明共軍分析家在精選著作中出現的幾個顯著特徵，包括情報利用、資訊攻擊、精準打擊、近戰和機動性、部隊的混編和整合、士氣和輿論。即使從長遠來看，共軍也認識到，鑒於這些當代挑戰，需要從根本上提高城鎮作戰能力。

Intelligence 情報

PLA observers have recognized that the complexity of the modern urban environment creates new demands for intelligence support to operations. Conflict in cities has created significant challenges even for the US military, highlighting the difficulty of decision-making under complex conditions in the PLA's view. Urban warfare in the "network age" has increased complexity, and there is greater difficulty in distinguishing adversary signals and communications when

civilian networks can be used to disseminate information, which exacerbates the challenge in "whether operational intelligence can be mined accurately in the information fog," according to one commentary. Greater precision in warfare also requires new advances in data fusion and sharing. PLA writers believe that drones can enable advances in technical reconnaissance, a dynamic identified in PLA analysis and commentary from events as early as the 2002 offensive launched by the Israeli Defense Forces against several towns in the West Bank. Yet, even as technology can seem to increase the transparency of the battlefield, the management of human intelligence continues to present distinct challenges, as PLA coverage of these conflicts has reflected.

共軍觀察家意識到現代城鎮環境的複雜性對作戰情報支持提出新的需求，城鎮衝突甚至給美軍也帶來重大挑戰，突顯在複雜條件下決策之難度。「網路時代」城鎮戰增添複雜度，當網路可用於傳播資訊時，識別敵方訊號和通信難度更大，因此加劇戰場情報整備之挑戰。提高作戰精準度還須在數據融合與共用取得新進展。共軍認為無人機可推動科技偵蒐進步。2002年，以色列國防軍對約旦河西岸幾個城鎮發動進攻，人員情報管理仍有顯著挑戰，正如共軍對這些衝突報導所反映出的事實。

Information Attacks 資訊攻擊

Urban warfare can start in the domain of information, which can reshape the urban environment, as the US joint publication on urban warfare (as cited in PLA writing) has highlighted. PLA scholars have emphasized that the launch of "soft kill" attacks, including electronic warfare, cyber warfare, and psychological warfare, to paralyze a city's defenses can lessen collateral damage and create conditions for later strikes that leverage firepower. For instance, PLA writers see the US intervention in Libya as having demonstrated the importance and potential advantages of cyber-attacks in urban warfare. US military capabilities in cyber warfare have provoked PLA concerns about the benefits such capabilities could create, including in future megacities, where the capacity to access and exploit the enemy's digital communications will be critical.

正如共軍著作中引述美國關於城鎮戰的聯合出版刊物所強調的，城鎮戰可從資訊領域重塑戰場環境。共軍學者強調，發動「軟殺傷」攻擊，包括電子戰、網路戰和心理戰，癱瘓一個城市防禦力可減少無辜傷亡，並為爾後運用火力打擊創造條件。例如，認為美國干預利比亞證明網攻在城鎮戰中的重要性與潛在優勢。美國在網路戰中的軍事能力引起共軍擔憂，因為在未來獲取和利用敵人數位通信的能力將至關重要。

Precision Strikes 精準打擊

Precision is essential within an urban environment. PLA discussions of the importance of precision in urban warfare today still use the phrase "battling a rat in china shop" that was initially invoked in reference to CCP efforts in the battle of Shanghai, as Qian Daichao and Zhao Xiangang of the PLA's National Defense University have noted. The PLA sees air power as a means to provide precision support to ground forces and create coercive effects that impact defenders psychologically; all while avoiding politically and economically costly collateral damage,



especially in major cities.

精準度在城鎮戰環境中至關重要。共軍在討論城鎮戰精準打擊之重要性時，仍然使用「在瓷器店裡打老鼠」一詞，這個詞最初是中共在上海戰役中的比喻，如共軍國防大學的錢代朝和趙先剛所說的。共軍將空中力量視為向地面部隊提供精準支援，並在心理上影響防禦者的一種手段，同時避免在政治和經濟上造成代價高昂的附加損害，尤其是在大城市。

Beyond traditional airpower, the PLA believes unmanned systems will offer new utility and flexibility. In particular, the PLA expects "intelligent unmanned combat equipment" will continue to "reduce personnel collateral damage and quickly achieve decisive combat effects." PLA writers have pointed to the Israeli military's use of the SkyLite B mini-unmanned aerial vehicle (UAV), which can be hand-carried, as an example of a cheap system that has proven capable and impactful.

除了傳統空中力量，共軍相信無人系統將提供新的實用與彈性。特別是，共軍預計「智慧型無人作戰裝備」將繼續「減少人員無辜傷亡並迅速取得決定性的戰果」。共軍作家指出以色列軍方使用手提式「天光B」微型無人機作為廉價系統的一個例子，該系統已被證明有影響力。

Close Combat and Mobility 近戰和機動性

Despite the contributions of airpower, close combat remains a central feature of urban warfare and counterterrorism operations; PLA writings recognize this reality. The urban environment tends to undercut militaries engaged in offensive conventional operations and generally benefits defenders and forces that fight asymmetrically, as one PLA commentary on the topic highlighted. PLA coverage of these conflicts also noted that training and specialized equipment at the unit level, whether body armor, night vision, or sniper rifles, are necessary for successful close combat operations. This conclusion stems from observations of the Israeli military's experiences, such as Operation Cast Lead that employed heavy artillery for firepower, drones for battlefield reconnaissance and Special Forces for close combat, a combination that the PLA deemed effective. American techniques in night fighting have also drawn the PLA's attention.

儘管空中力量貢獻卓著，但近戰仍是城鎮戰和反恐行動的核心特徵，共軍的著作承認這個現實，城鎮環境往往削弱攻擊方，且通常有利於非對稱作戰的防禦者與部隊。共軍對這些衝突的報導還指出，訓練和專業化基層單位裝備，無論是防彈衣、夜視鏡或狙擊步槍，對近戰勝利都是必要的。此結論源於對以色列軍方交戰經驗的觀察，例如使用大量砲兵火力的「鑄鉛作戰」（加薩戰爭）、用於戰場偵察的無人機和用於近戰特種部隊，共軍認為這些組合是有效的。美國的夜戰技術也引起共軍關注。

Mobility is critical within a complex, dynamic operational environment. In cities, the use of tanks and light infantry vehicles can enable mobility and be adapted to the terrain and threats. For instance, PLA accounts of the Syrian war noted that the Syrian government equipped its tanks

and armored vehicles with added protection to prepare for urban street fighting, including anti-theft nets, steel bars, and other supporting materials. PLA observers also praised the "flexible use of motorcycles" as an important tool in Syrian operations to retake Salma, as motorcycles were well-suited to the terrain. The adaptation of armored vehicles to the demands of urban operations remains a focus of the PLA, as described in several studies concentrating on options for the design and employment of armored vehicles in urban combat.

機動性在複雜、多變的作戰環境中，至關重要。在城鎮中，使用戰車和輕型步兵車輛可提高機動性並適應地形和威脅。例如，共軍對敘利亞戰爭的報導指出，敘利亞政府為其戰車和裝甲車配備額外保護，為城鎮巷戰作準備，包括防盜網、鋼筋和其他輔助材料。共軍觀察員還稱讚「靈活使用摩托車」作為敘利亞收復薩爾瑪行動的重要工具，因摩托車非常適合該地形。裝甲車輛適應城鎮作戰仍是共軍的一個重點，正如幾項研究所述，焦點在城鎮戰中裝甲車輛的設計和使用。

Hybridity and Integration of Forces 部隊混編與整合

PLA scholars believe that the blurring of political and military struggle in urban combat creates dynamics of "hybrid warfare". The PLA has explored concepts of hybrid warfare, which, in its view, originated from American antecedents but took shape through Russian implementations in Ukraine and beyond. The PLA regards this notion of hybrid warfare as both a style of warfighting from which the PLA should learn as well as a threat for which the PLA must prepare in its own defense. Urban warfare must leverage units and forces across domains and integrate otherwise disparate efforts, as a prominent commentary by Chen Wenchao and Wen Xiaopeng argued. In their view, "multi-domain synchronization" as well as the coordination of information strikes and firepower, will be critical to success in urban environments.

共軍學者認為，城鎮戰中政治和軍事鬥爭的模糊創造「混合戰爭」之動態，在他們看來共軍探索混合戰爭的概念起源於美國，但通過俄羅斯在烏克蘭及其他地區的衝突而形成。共軍認為應該學習此種混合戰爭的方式，也是必須為自身防禦作好準備。正如陳文超和溫曉鵬的評論指出，城鎮戰必須跨領域利用各級部隊，並整合其他勢力。「多領域同步化」、資訊打擊及火力協調對在城鎮環境中取得勝利至關重要。

Morale and Public Opinion 士氣和輿論

In urban warfare, intangible influences can be integral to success. For instance, the PLA observed Iraqi militia fighters demonstrate great "combat spirit" in battles with US forces, such as south of Baghdad at Diwaniya in October 2006. In retrospect, the outcome of the war in Afghanistan revealed that the Taliban's "will to fight" overcame their disadvantages in numbers and weaponry. Coverage in PLA Daily concluded that the Taliban's focus on "protracted warfare, public opinion warfare, and psychological warfare" enabled the group to eventually seize power. PLA observers have compared the Taliban's success in taking control of Afghanistan to the CCP's victory in the Chinese Civil War, insofar as a force of inferior capabilities eventually prevailed over a superior military weakened by poor morale and limited public support," as scholar Geremie R. Barme has noted.



在城鎮戰中，看不到的影響對成功影響甚鉅。例如，共軍觀察到伊拉克民兵在與美軍交戰中表現出強大的「戰鬥精神」，例如2006年10月在巴格達以南的迪瓦尼亞。回想起來，阿富汗戰爭結果表明塔利班「戰鬥意志」克服其在數量和武器方面的劣勢。《共軍報》報導得出的結論是，塔利班對「持久戰、輿論戰和心理戰」的重視使該組織最終奪取政權。學者巴爾梅注意到共軍觀察家將塔利班成功控制阿富汗比作中共在國共內戰中的勝利，因為一支實力較弱的部隊最終戰勝一支士氣低落和民眾支持有限的軍隊。

Beyond morale on the battlefield, public opinion is critical to the legitimacy of operations in the long term. While the use of traditional media has long been a feature of modern warfare, social media has become a new arena of competition. The PLA has highlighted Israel's "Operation Cast Lead" as a conflict worthy of review and study in that regard, including the "second battlefield" of a "social media" war in which Israel and Hamas contested the narrative on the battlefield of public opinion, and Israel's approach to psychological operations aimed to limit the adverse impacts in global public opinion. The PLA's espoused concerns about public opinion and legitimacy in domestic and global public opinion are notably at odds with its notion of cyberattacks or targeting of critical infrastructure to undercut the morale of civilian populations.

除戰場上的士氣，從長遠來看，輿論對作戰的合法性至關重要。雖然使用傳統媒體早已成為現代戰爭特點之一，但社群媒體已成為新的競爭舞台。共軍強調以色列的「鑄鉛作戰」是一場值得回顧和探討的衝突，包括以色列和哈馬斯在「社交媒體」戰的「第二戰場」，以色列心理戰之方法旨在限制全球輿論的不利影響。共軍對公眾輿論和國內及全球輿論合法性的擔憂，顯然與其網路攻擊或以關鍵基礎設施為目標，以削弱平民士氣的概念不一致。

The PLA's Training for Urban Warfare 共軍城鎮戰訓練

The PLA's studies of urban warfare have created a foundation for training and experimentation with new tactics. Despite the CCP's early history with urban warfare, its current interest is a contemporary phenomenon that came into focus in the mid-2000s, and the PLA has since pursued several dedicated initiatives to prepare for future urban combat. In the process, the PLA took note of the US military's investments in training for urban warfare after the initial challenges US forces encountered in Iraq and Afghanistan. Not unlike other elements of its training, the PLA's urban warfare training efforts have been strongly informed by American initiatives, including its use of opposing force (OPFOR) programs and specialized training facilities. Urban warfare exercises as reported in PRC state media have also become notable instruments in signaling for purposes of political warfare and propaganda.

儘管中共早期有城鎮戰歷史，共軍對城鎮戰的研究已為新戰術的訓練和試驗奠定基礎，其聚焦在城鎮戰，始於2000年中期，共軍此後採取幾項方案為未來城鎮戰作準備。此過程中，共軍注意到美軍在伊拉克和阿富汗遇到最初的挑戰後對城鎮戰訓練的投資。與其他訓練要素不同，共軍的城鎮戰訓練受到美國作法強烈影響，包括使用對抗部隊和專門的訓練設施。中共官媒報導的城鎮戰演習也已經成為政治和宣傳戰之工具。

Experimentation, Specialized Facilities, and Other Initiatives 試驗、特殊設施和其他作法

The PLA's urban warfare training exercises have improved in scale, complexity, and realism in recent years. This trend has been bolstered by the creation and improvement of forces dedicated to simulating adversaries ("blue forces" in the PLA's parlance) and the shift toward "base-ized training", which allows for the development of more realistic "training opponents" and environments for the PLA. To date, only a small number of militaries have invested the resources to build facilities geared toward urban warfare training. The PLA joins the US military in creating dedicated environments that mimic cities in which it might someday fight. Nonetheless, as the American experience has demonstrated, even the most rigorous or realistic training cannot provide complete preparation for the demands of fighting on urban terrain. The PLA's urban warfare training facilities and activities have mainly centered on the Zhurihe Training Base in Inner Mongolia. Zhurihe, initially established in 1957, started to visibly emphasize urban operations in its facilities by the mid-2000s. By 2006, a replica of a city center had also been constructed at Zhurihe.

近年來，共軍的城鎮戰訓練演習在規模、複雜性和逼真程度都有所提高。共軍致力於模仿敵人(稱之為「藍軍」)，並轉向「基地化訓練」，以增加訓場之真實性。迄今為止，只有少數軍隊投入資源建設城鎮戰訓練設施。共軍跟美軍一樣，創造城鎮戰戰場，然正如美國經驗證實，即使是最嚴格或最真實的訓練，也無法為城鎮戰的地形需要提供完整的準備。共軍的城鎮戰訓練設施和活動主要集中在內蒙古的朱日和訓練基地。朱日和創建於1957年，2000年中期才開始強調城鎮戰建設，到2006年，朱日和建造第一座城鎮複製品。

Over time, the PLA's training for urban warfare has evolved and gradually increased in sophistication. In March 2008, the Beijing Military Region, since superseded by the Central Theater Command, launched a pilot initiative focused on "training on new topics in urban warfare." In particular, a specific motorized infantry brigade was designated to serve as a pioneer in determining new "content, methods, procedures, and combat plans for urban warfare training." This inquiry initially involved primarily theoretical initiatives, as the PLA was starting without prior materials or experience. The urban warfare training facility at Zhurihe hosted its first major exercise focused on urban operations in 2009. At the time, the Beijing Military Region organized urban combat exercises focused on offensive operations between red (PLA) and blue (adversary) forces contesting control of a mock city that the red force had to seize control of and restore order within.

隨著時間推移，共軍的城鎮戰訓練已有所進展並日漸複雜。2008年3月，北京軍區自隸屬中央戰區司令部以來，啟動「城鎮戰新課題培訓」試點專案。尤其是某一機步旅被指定為城鎮戰訓練先鋒，以決定新的城鎮戰訓練之內容、方式、程序與戰鬥計畫，因共軍在起初無實務或經驗基礎，此試驗僅能涉及理論。朱日和城鎮戰訓練設施2009年舉辦第一次的大型城鎮戰演習，當時，北京軍區負責舉辦紅軍(共軍)和藍軍(敵軍)對抗行動，爭奪模擬城鎮之控制權，紅軍最終必須控制和恢復城內之秩序。



The first major confrontation exercise at the Zhurihe Urban Combat Training Ground in 2009 reportedly involved an urban assault scenario. In this exercise, the red force had to defeat the blue force and then rescue the wounded; clear the battlefield; restore order; organize a watch of the periphery, important roads, and buildings; and organize local defense and public security forces. The red force's assault on the city involved a "special mixed combat team" composed of tanks and mechanized units. While the exercise primarily involved units from the Beijing Military Region, the red force also involved a People's Liberation Army Air Force (PLAAF) division, a People's Armed Police (PAP) unit, and a PLA Second Artillery Force (now known as the PLA Rocket Force) unit, thus reflecting a joint approach. The exercise was convened on a training ground with a large urban area and occurred in a "realistic and complex electromagnetic environment." PLA observers said the reported success of this exercise demonstrated the facility was an "ideal training platform."

據報導，2009年在朱日和城鎮戰訓練基地進行的首次重大對抗演習涉及城鎮攻擊場景。在此次演習中，紅軍須打敗藍軍、搶救傷員、清除戰場、恢復秩序、監視周邊重要道路和建築物、組織地方守備和公安部隊。紅軍對該城進攻是由一個戰車和機械化部隊組成的「特戰混合戰鬥隊」，雖然演習部隊主要來自北京軍區，紅軍也包含空軍、武警和第二砲兵(現在稱為中國人民解放軍火箭軍)等單位，因此是一個聯合作戰演習。此演習在一線城市訓場進行，係「實而複雜的電磁環境」中。共軍觀察員表示，此次演習成功，展現該設施是一個「理想的訓練基地」。

However, these initial efforts raised several problems. During the 2009 exercise, the "city battle" did not center on the city enough to allow for realistic simulation of urban combat. Despite its early history with urban warfare, the PLA's lack of recent experience with this style of combat was recognized as a considerable challenge at the time. "Traditional thinking must be changed. The examples of old battles do not explain the problem....To study modern urban warfare, we must have a broad vision and brains," urged Wang Bing, a brigade chief from the Beijing Military Region.

然而，這些初期的努力引發幾個問題。在2009年的演習中，「城鎮戰鬥」不夠以城鎮為中心，無法進行真實的城鎮戰模擬。儘管共軍早期有過城鎮作戰的歷史，但近期缺乏這種作戰經驗，被認為是一個相當大的挑戰。北京軍區參謀長王斌要求道：「傳統思維須改變，舊戰爭經驗已不能應付……為研究現代化城鎮戰須要有開闊視野和頭腦。」

The then-Jinan Military Region pursued studies to evaluate new theories and tactics for urban warfare. For instance, experts were dispatched to operations departments across different military regions and engaged with military academic institutions, including the Shijiazhuang Army Command Academy, to collect data and review recent episodes of urban warfare around the world, as well as simulate these operations. This effort explored recent events and studied cases of city battles, including tactics, for different types of targets, such as urban buildings, overpasses, underground facilities, and energy infrastructure. When the Jinan Military Region convened an "urban offensive combat exercise" involving an armored brigade in November 2010, the exercise was described as among the first urban assault combat exercises since the PRC's

founding. During the exercise, the red force used "comprehensive" firepower, including PLAAF aircraft, army aircraft, and ground artillery, to degrade key blue force targets, such as its command systems and reconnaissance capabilities. The brigade involved in the assault was equipped with multifaceted reconnaissance capabilities, including a drone team and radar, cameras, and other sensors. The brigade included special operations teams that engaged in clandestine operations and leveraged intelligence information to enable targeting. The red force also concentrated on gaining psychological advantages during this exercise, including through electromagnetic attacks and deceptive or disruptive measures intended to cause confusion or undermine adversaries emotionally. Their political commissar noted at the time that "[w]ith the development of technology, deterrence has been gradually upgraded from traditional tactical actions... to the strategic level. It is no longer a written theory to subdue (enemy) soldiers without fighting."

當時濟南軍區評估城鎮戰的新理論和新戰術，例如，專家被派往不同軍區的作戰部門，與包括石家莊陸軍指參學院在內的軍事院校合作，收集數據，回顧世界各地最近發生的城鎮戰事件，並模擬這些行動。此研究探討近期發生事件，並著重在城鎮戰案例，包括針對不同類型目標的戰術，如城鎮建築、天橋、地下設施和能源基礎設施。2010年11月，濟南軍區投入一個裝甲旅參與「城鎮戰攻擊作戰演習」，被描述為中共成立以來第一次城鎮進攻型作戰演習。在演習中，紅軍使用「綜合」火力，包括空軍戰機、陸軍戰機和地面火炮，削弱藍軍重要目標，如指揮系統和偵察能力。參與攻擊的旅具備多方面偵察能力，包括一個無人機小組、雷達、攝影機和其他感應器。這個旅還包含從事秘密行動和利用情報來鎖定目標的特戰小組。在本次演習中，紅軍還集中精力在心理作戰，包括透過電磁攻擊和欺騙性或破壞性措施，企圖造成混亂或在情感上削弱藍軍。當時，他們的政委指出：「隨技術發展，威懾已從傳統戰術行動逐步升級至戰略層面，不再是紙上談兵讓敵人不堪一擊。」

After its initial reported exercises, the "Zhurihe Urban Combat Training Ground" expanded to enable more sophisticated training operations over the coming years. Peculiarly, these installations included the addition of a scaled-down replica of France's Eiffel Tower around 2010-2011. The urban training facilities at Zhurihe notably expanded between 2013 and 2015, with a shift from more generic facilities to those focused on simulating urban warfare in Taiwan. In 2013, Zhurihe added a highway cloverleaf interchange that resembles two interchanges near Taiwan's Taichung International Airport and the Taiwanese Air Force's adjacent Ching Chuan Kang (CCK) Air Base. A replica airfield that appeared to mimic another Taiwanese Air Force base near Taitung had been constructed by October 2014. By 2015, the urban training area at Zhurihe had added replicas of Taiwan's Presidential Office Building and its Ministry of Foreign Affairs building, as well as their surroundings.

「朱日和城鎮作戰訓練場」在首次演習報導數年後擴大規模，以能在未來實施更複雜之訓練。尤其是這些設施包括在2010至2011年增加一個按比例縮小複製的法國艾菲爾鐵塔。朱日和的城鎮訓練設施在2013至2015年間大幅擴建，著眼於模擬臺灣城鎮戰的設施。2013年，朱日和增設類似空軍清泉崗基地附近的交流道；2014年10月，仿造臺東空軍基地的一座機場也已建成；到2015年，該基地又添加模仿臺灣總統府和外交部大樓及其周遭環



境。

Zhurihe has been the primary center for the PLA's urban warfare training, but the PLA has expanded its facilities in other regions as well. The former Nanjing Military Region (Eastern Theater Command), which would have primary responsibility in a Taiwan conflict scenario, has an urban training facility that was created on the home training ground of one of its units in the 2010s. That facility hosted training for a brigade of the 12th Group Army (now the 71st Group Army) in 2014 for instance.

朱日和一直是共軍城鎮戰訓練的主要中心，但也在其他地區擴大設施。前南京軍區(東部戰區司令部)，將在臺灣衝突場景中承擔主要責任，它擁有一個在2010年創建的城鎮戰訓練設施，第12集團軍(現在的第71集團軍)的一個旅於2014年在該設施實施訓練。

In particular, the PLA notes that "shifts in terrain have become an indispensable starting point for changing the mode of generating combat power and improving the quality of preparations for military struggle." The red force reportedly concentrated on demolition and breaching and entering buildings; combat methods of "psych (ological) war (-fare) to break the enemy"; and controlling landing points for aircraft, among other efforts.

共軍特別指出：「地形地貌的變化已成為改變戰力生成方式和提高戰備質量不可或缺的起點。」據報導，紅軍置重點於拆毀、破壞和入侵建築物、心戰破敵，以及控制飛機著陸點等方法。

Even parts of the PLA not previously involved in urban warfare have recently begun to be so. For example, the PLA Navy Marine Corps (PLANMC) has expanded its operational engagements beyond beaches to include urban areas, jungles, and mountains. As of 2014, the PLANMC's training included urban offensive combat, as well as long-range mobility and cold weather.

即使是以前沒有參與城鎮戰的部隊，最近也開始參與城鎮戰。例如，海軍陸戰隊已將其作戰活動從海灘擴展到城鎮地區、叢林和山區。2014年，海軍陸戰隊的訓練包括城鎮攻擊戰鬥、遠程機動和寒訓。

The PLA has showcased its urban warfare training facilities in both training and propaganda. In particular, a replica of the Taiwanese Presidential Office Building was featured in footage of the 2015 Stride exercise. The exercise involved a motorsized infantry brigade from the Beijing Military Region confronting a blue force that had occupied a city. This operation centered upon a "decapitation" offensive targeting the blue force commander based on triangulating their position in a vehicle, attack-ing the convoy, forcing the commander to evacuate into a municipal building, and finally killing the commander. A participating brigade commander compared it to trying to "capture a rat in a china shop" a variant of the famous phrase regarding the difficulty of urban warfare initially used by Chen Yi. The exercise featured fierce street fighting, and the brigade directly commanded Army aviation and special operations forces. In the process, the red force used video reconnaissance from UAVs to support command decision-making. Notably, CCTV released

footage from this exercise showing a replica of Taiwan's Presidential Office Building at Zhurihe under attack by a red force, a signal perhaps intended for coercive purposes against the backdrop of then-upcoming Taiwanese presidential elections. Building upon this training, Stride-2017 also included elements of the exercise devoted to "position offensive operations," "urban area offensive operations," and "position defensive operations."

共軍已在訓練和宣傳中展示城鎮戰訓練設施，尤其一個仿造的臺灣總統府出現在2015年的「跨越」演習。演習中，來自北京軍區的一個機步旅與占領一座城鎮的藍軍對峙。這個行動為針對藍軍指揮官的「斬首」攻擊，根據他們在車輛中的位置實施三角定位，攻擊車隊，迫使指揮官撤退到市政大樓，最後殺死指揮官。參與演習的旅長比喻這就像在「盜器店裏捉老鼠」，這是陳毅最初關於城鎮戰困難之處的著名說法。此次演習以激烈的巷戰為特色，旅直接指揮陸航和特種作戰部隊。在此過程中，紅軍使用無人機進行影像偵察，以支援指揮官的決策。值得注意的是，以即將到來的臺灣總統選舉為背景，央視公布了演習的畫面，顯示位於朱日和的臺灣總統府遭受紅軍攻擊，這可能是一個威脅信號。在這一訓練的基礎上，「跨越」演習還加入專門用於「陣地攻擊」、「城鎮攻擊」和「陣地防禦」的演習要素。

Aviation in Urban Warfare Training城鎮戰訓練中的陸航

The PLA regards its aviation assets, especially helicopters, as key components of combined arms and joint operations in urban environments. In 2018, an army aviation brigade of the 79th Group Army trained in an urban setting, preparing for challenges such as takeoff and landing in constrained spaces. Their training highlighted the importance of maneuverability and leveraged a small "networked" approach to organization. While the PLA's helicopters previously concentrated on operations in open, rural environments, they have started to shift their focus toward operations within urban environments. As of 2018, new military training guidance apparently included guidance that PLA Army Aviation helicopters introduce "urban operations training content including landing and taking off from the roofs of buildings, landing in very narrow areas, and electronic warfare" to their training regime.

共軍認為其航空器，特別是直升機是聯合軍種和城鎮環境聯合作戰的關鍵成分。2018年，第79集團軍的一個陸航旅在城鎮環境中進行訓練，為在有限空間內起飛和降落等挑戰做準備，此培訓強調可操作性的的重要性，並利用小型的「網路化」組織方法。直升機操作以前集中在開放農村，現在轉移到城鎮環境內操作，截至2018年，共軍新的軍事訓練指導指出，陸航直升機引入「城鎮戰訓練內容，包括從建築物屋頂降落和起飛、在非常狹小的區域遂行降落及電子戰」的指導。

A city's complex geography and contested electro-magnetic environment can undercut situational awareness and present a major challenge for aircraft. In focusing more on urban warfare, PLA helicopters have encountered the unique challenges of operating in such an environment. The constraints of space and electromagnetic interference have required learning and adaptation to deal with these issues. For the PLA, resolving such challenges would be particularly important in a Taiwan scenario given the extensive urbanization that is characteristic of Taiwan's cities. For



example, the PLA would need to keep ground teams leaner to avoid congestion on city roads. Helicopters would be critical for delivering special operations force (SOF) units to objectives in urban areas in the early stages of an assault.

城鎮複雜的地理環境和電磁環境會削弱態勢感知能力，對飛機構成重大挑戰。於城鎮戰中，共軍的直升機面臨此環境獨特挑戰。空間和電磁干擾的限制需要學習和調適以處理此類問題。對共軍而言，考慮臺灣全面城鎮化的特點，解決此挑戰更顯重要，例如，在攻擊初期，共軍須精簡地面部隊，避免城鎮道路擁堵，直升機能將特種作戰部隊運送到城鎮地區的目的地相當重要。

Urban Warfare on Display城鎮戰展示

The PLA's increased interest in urban warfare was featured when it showed off its new set of camouflage pattern uniforms in 2019 during the military parade that marked the 70th anniversary of the PRC's founding. Unlike in the past, when camo patterns were determined by service or branch, this new set of uniforms was designed to be worn based on the environment in which troops would operate, with a gray pattern for urban terrain featured among the five options. PRC media explained at the time the new pattern was motivated by the fact that many current conflicts are fought in urban areas and that the PLA has expanded its training in urban environments.

2019年慶祝中共成立70周年的閱兵典禮，共軍展示一套新式迷彩圖案制服，這顯示其對城鎮戰越感興趣。與過去不同的是，迷彩服的樣式是根據所屬的部隊或部門來決定的，而這套新制服的設計是根據部隊作戰環境來決定，灰色圖案代表城鎮地形，中國媒體當時解釋，新樣式設計被許多當前的城鎮戰衝突和共軍在城鎮環境中擴訓所激發。

PRC state media has highlighted improvements in the sophistication of PLA training and exercises for urban warfare, narratives that contribute to coercion and propaganda. In December 2020, CCTV released a feature titled "Strike the City: 'Offensive and Defensive Battles'" that included Type 96A main battle tanks and Type 04 and 04A infantry fighting vehicles engaged in a combat exercise. The forces involved came primarily from the 72nd Group Army of the Eastern Theater Command, the command with primary responsibility for a potential invasion of Taiwan. As recounted in this military documentary, the red force ultimately succeeded in seizing the city within hours. This program conveyed that urban warfare is not only a vital form of modern warfare but also among the "the hardest battles to fight," including because of the constraints on space and maneuverability and intense difficulty of using fire support with the risks of collateral damage.

中國官媒強調，共軍城鎮戰訓練和演習的複雜性提高，有助於威脅和宣傳。2020年12月，中央電視台播出《攻城：攻守戰》特輯，96A型主戰戰車和04、04A型甲車參加實戰演習，主要來自東部戰區的第72集團軍，該單位主要負責入侵臺灣。正如這部軍事紀錄片所敘述的，紅軍最終在幾小時內成功地占領城鎮，該節目傳達城鎮戰不僅是現代戰爭的一種重要形式，而且是在「最困難的戰鬥中作戰」，包括因空間和機動性限制與使用火力支援的巨大困難及附帶損害的高風險。

The Eastern Theater Command engaged in an urban offensive and defensive exercise in 2021. In May, state media reports on the exercise showed a brigade from the 72nd Group Army using an urban warfare training ground that appeared particularly extensive (the precise location and designation of the facility was unspecified). The structures appeared wider and taller than those shown at other sites shown in past years, a feature that could enhance the level of realism for training for combat in a modern, developed city.

東部戰區司令部在2021年進行城鎮攻防演習。當年5月，媒體報導第72集團軍某旅使用看起來特別大的城鎮作戰訓練場地(該設施的確切位置未指明)，這些建築看起來比過去幾年展示的其他場地更寬更高，此特點可提高現代城鎮作戰訓練真實感。

For the exercise as a whole, "a number of UAVs and UGVs played a key role in cracking the 'code' to city offensive and defensive warfare," according to media coverage of the event. To enable effective reconnaissance under those conditions, the red force deployed the CH-902, a short-range UAV that helped pinpoint the location of the blue command post, artillery positions, and other important targets. The "RoboMaster S1" UGV was also used to help clear buildings.

據報導，整個演習，無人機及地面無人載具在破解城鎮攻防戰中發揮「關鍵」作用，乃是在此條件下進行有效偵察，紅軍部署短程無人機CH-902，幫助定位藍軍、砲兵陣地和其他重要目標的位置；「機甲大師S1」無人載具也用於協助掃蕩建築物。

In August 2021, the 73rd Group Army engaged in a live-fire exercise with an "amphibious heavy synthetic brigade." This group army is the successor to and bears the pendant of the Jinan Second Regiment, tracing its history directly back to the Battle of Jinan, which the CCP remembers as a critical turning point in the Chinese Civil War. This historical connection may possess a certain symbolism for the CCP as Xi Jinping aspires to conclude that conflict decades later through what he characterizes as "reunification" with Taiwan. The 72nd Group Army has also explored new models for "manned and unmanned coordinated operations", using UAVs for missions that include high-altitude reconnaissance, fixed-point strikes, mine sweeping and detonation, and fire support.

2021年8月，第73集團軍與「兩棲重型合成旅」進行實彈演習。此集團軍是承襲濟南第二團，其歷史可直接追溯到濟南戰役，中共將濟南戰役視為中國內戰關鍵轉折點。這種歷史聯繫可能對中共具有某種象徵意義，因為習近平渴望在幾十年後通過「統一」臺灣來結束衝突。第72集團軍還探索新模式「有人無人協同作戰」，使用無人機執行任務，包括高空偵察、定點打擊、掃雷、引爆及火力支援等任務。

Technology and Transformation in Urban Warfare 城鎮戰的科技與轉型

The PLA seeks to leverage new technologies to facilitate future urban warfare. As rapid advances occur in emerging and commercial technologies, the capabilities available to major militaries, as well as non-state actors, are evolving dynamically in ways that may change the



conduct and character of these operations in the long term. Advances in drones and artificial intelligence (AI) technologies are creating new capabilities for militaries. The creation of smart cities and the expansion of existing cities underground promises to change the physical terrain of urban battlefields and heighten their existing complexity. Within the PLA, new concepts of operations and guidance for the conduct of urban operations may accompany revisions and expansions upon the doctrines established by previous generations of campaigns. The PLA believes that future combat will be characterized by the accelerated integration of unmanned systems and the progression of "intelligentization," which has been made a priority in Chinese military strategy and modernization. The application of emerging technologies to create new capabilities could contribute to the PLA's capacity in future urban warfare. However, the complexity of the urban environment may also create distinctive challenges for the realization of the potential of such trends in practice.

共軍尋求利用新技術以有利未來城鎮作戰。隨著新興和商業技術的快速發展，主要軍事力量以及非國家行為體的能力，正以可能改變這些作戰的方式急遽地演進。無人機和人工智慧技術的進步正為軍隊創造新技能。智慧城鎮的創建和現有城鎮地下空間的擴張，改變城鎮戰場的物理地形，提高現有戰場的複雜性。在共軍內部新的作戰概念和城鎮作戰指導方針，可能伴隨對前幾代戰役建立的理論修訂和擴展。未來作戰將以無人系統加速融合「人工智慧化」發展為特徵，成為中國軍事戰略和現代化重點。應用新興技術來創造新的能力，可能有助於其在未來城鎮戰中的能力。然而，城鎮環境的複雜性也可能為實現這種趨勢帶來獨特的挑戰。

"Dronification" of Combat 「無人化」戰鬥

The PLA's discussion of urban warfare often focuses on the trend toward "dronification" (無人化). The PLA anticipates urban operations will continue to evolve in the direction of "unmanned, intangible (i.e., stealthy), and silent" operations in which remotely operated assets are at the forefront of combat. This assessment is influenced by the PLA's attention to the US military's drive to promote the use of drones and manned-unmanned teaming, as well as the prominent employment of these capabilities by the Israeli military. The PLA views "swarm tactics" with "smart drones" as battle-proven based on their employment in local wars, such as by Azerbaijan against Armenian forces in their 2020 conflict.

共軍關於城鎮戰的討論常常集中於「無人化」的趨勢。共軍預期城鎮戰將繼續朝著「無人、無形、無聲」的方向發展，其中遠程作戰裝備最為突出，受到美軍推動無人機和有人／無人駕駛團隊的影響及以色列軍方對此能力傑出運用。基於戰爭中應用，共軍認為「智慧無人機」的「蜂群戰術」已經實戰驗證，例如2020年亞塞拜然與亞美尼亞的衝突。

PLA scientists and strategists envision fighting unmanned operations in future cities. In one prominent commentary on the topic, PLA analysts anticipated continued technological advancement will make the integration of unmanned intelligent weapons systems into urban operations critical to "minimize casualties and improve combat efficiency," including through enabling precision strikes. The new concepts contemplated but not elaborated upon include ideas of

"unmanned denial warfare", "urban isolation blockade warfare", "psychological cognitive control warfare", and "swarm decapitation warfare". While these concepts are not explained or elaborated upon, these provide indications of the attempts to generate new and more creative approaches. Going forward, the PLA expects swarms of drones to allow for "higher combat effectiveness" and to "perform a variety of tasks in high-risk and complex environments." The PLA also sees the level of control and safety that can come from using drones ahead of troops as an important instrument to navigate the complex warfare inherent to an urban environment and to manage the political impacts of operations by minimizing collateral damage.

共軍的科學家和戰略家們設想在未來城鎮遂行無人作戰。在一篇評論中，分析人士預估，持續的技術進步將使無人智慧武器系統整合到城鎮戰中，關鍵是「減少傷亡和提高作戰效率」，包括使精確打擊成為可能。共軍提出「無人拒止戰」、「城鎮隔離封鎖戰」、「心理認知控制戰」和「蜂群斬首戰」等新概念。雖然無詳細解說，但這些概念試圖產生新形態且更具創造性的方法。展望未來，共軍希望成群的無人機能夠實現「更高作戰效率」，並「在高風險和複雜環境中執行各種任務」。共軍還認為在派遣部隊前使用無人機可提升管制和安全性，將其作為一種重要的工具，用於複雜的城鎮環境中導航，使戰爭造成的無辜傷亡降至最低。

Ongoing Armaments Development for Urban Warfare 持續進行的城鎮戰軍備發展

Beyond the PLA, Chinese companies involved in the defense industry have started to develop weapons and equipment specifically for urban operations. As more-successful systems are produced and deployed, the PLA's capabilities to engage in operations in an urban environment will improve.

除了軍方，中國軍工企業已開始開發專用於城鎮戰的武器和設備。隨著生產和部署更成功的系統，共軍在城鎮環境中作戰的能力將得以提升。

Tanks and Armored Vehicles戰車和裝甲車輛

While new vehicles tend to grab the spotlight, the PLA has been upgrading existing models of tanks to be suited better for operations in an urban environment. For example, the Type 96A, a main battle tank, has been improved with "new modular composite armor and reactive armor" and metal grilles, as well as equipped with an advanced fire control apparatus and night vision system. This upgraded model was shown in use in urban warfare training in 2020. The design is said to reflect the PLA's perspective on lessons learned from previous instances of urban warfare that highlighted the importance of tank survivability. The changes in armor and the addition of metal grilles improve the vehicle's ability to deal with rockets and Molotov cocktails-dangerous threats to armored vehicles in a hostile urban environment, according to media reporting. Other tanks, such as the Type 96B, have had "remote control weapons stations" installed to enable tank crews to operate machine guns and other weapons designed to deal with targets closer to the tank more safely and effectively than the main gun can hit.

雖然新式車輛往往吸引目光，共軍則持續升級現有戰車，以便更能肆應城鎮戰。例



如，96A型主戰戰車，已改進「新模組化複合裝甲和反應裝甲」及金屬履帶，並配備先進火控裝置和夜視系統。升級後的戰車已用在2020年的城鎮戰訓練中，據說設計上反映共軍從以前城鎮戰中吸取的教訓，強調戰車生存能力的重要性。據報導，裝甲的改進和金屬履帶的增加，提高車輛在敵對的城鎮環境中應對火箭和燃燒彈的能力，其他戰車，如96B型，已安裝「遠程控制武器載台」，使戰車乘員能操作機槍和其他武器，以更安全、更有效地對付戰車附近的目標。

Beyond upgrading older models, the PLA is also introducing new tanks into wider service. The Type 15, China's most advanced lightweight tank, entered service with the PLA Navy's Marine Corps as of June 2021. Previously, only the PLA Army was equipped with the Type 15. The Type 15 is designed to be suited to "amphibious landing and fast reaction tasks" and could also operate in urban warfare scenarios.

除升級舊型號，共軍還引入新戰車。15式戰車是中國最先進的輕型戰車，於2021年6月進入海軍陸戰隊服役。先前，只有陸軍配備15式戰車，其適合「兩棲登陸作戰和快速反應任務」，也可在城鎮戰狀況中運作。

China North Industries Group Corporation Ltd. (NORINCO) has been at the forefront of developing and exporting tanks and armored vehicles as well as unmanned systems. Beyond the PLA's own demands, overseas customers are reportedly seeking improved urban warfare protections for Chinese tanks, such as the VT-5. Other specialized vehicles are also under development, such as the PT3 Type 4X4 Light-duty Armored Vehicle, which includes protection against mines and improvised explosive devices (IEDs) and is advertised as "internationally leading" and as being suitable for military operations and military operations other than war, including urban operations.

中國北方工業集團公司在戰車和裝甲車輛以及無人系統開發和出口，一直位居先導。除自身需求之外，據報導海外客戶正為中國製的戰車尋求改良，如VT-5。其他特殊用途車輛也在開發中，如PT3 4×4輕型防雷裝甲車，標榜「領先國際」，適用於軍事行動和戰爭以外的軍事行動，包括城鎮戰。

Rockets火箭

Beyond the PLA's existing armaments, specialized rockets may be necessary for the urban environment. For instance, the "Assault Hand-1" rocket, debuted in 2014 by the China Poly Group, is China's first domestically produced rocket specifically designed for urban warfare. The rocket includes a warhead designed to cause minimal collateral damage, to be reliable at close ranges, and to be launchable with limited space. The rocket is also advertised as producing "micro" sound, light, flame, and recoil.

除了共軍現有的武器裝備，城鎮環境可能需要特製的火箭。例如「突擊手1」火箭彈，於2014年由中國保利集團亮相，是中國第一個國產火箭，專為城鎮戰設計，該火箭包含一個彈頭，用於造成最小的附帶損害，在近距離相當可靠，並可在有限的空間發射。火箭也被宣稱僅產生「微」聲、光、火焰和後座力。

Drones無人機

The PLA has increasingly incorporated drones, both aerial and ground, into its urban warfare training in recent years, having found them to be critical to effectively conducting operations. PLA drones include DJI's "RoboMaster S1", a small UGV that the 72nd Group Army has used in urban warfare training. The PLA uses the RoboMaster S1, which is also available commercially, for reconnaissance in simulated urban environments and has praised its maneuverability, which allows it to advance ahead of soldiers to areas where visibility would be limited, such as building entrances and intersections.

近年來，共軍逐漸將無人機(空中和地面)納入城鎮作戰訓練，發現無人機對有效開展行動至關重要。中國無人機，包括「機甲大師S1」型，是第72軍團用於城鎮戰訓練的小型無人機。共軍使用「機甲大師S1」型，也可在商業上買得到，用於模擬城鎮環境的偵察，以機動性著稱，這使得它可以前推到部隊能見度有限的地區，如建築物入口和十字路口。

The PLA is also actively working to promote the development of drones through competitions it hosts and organizes, which have been convened both by the CMC and through individual services. For example, the PLA Army Equipment Development Department organized the first "Crossing Obstacles" event in 2016, an annual challenge series intended to promote the development of UGVs. One of the components in the first iteration of Crossing Obstacles was "urban battlefield reconnaissance and search." Like many of the defense equipment and technology competitions that the PLA has sponsored, this series benefits from the competition introduced through the involvement of research institutes, private enterprises, and other stakeholders in addition to traditional state-owned enterprises.

共軍還通過自己主辦的競賽，積極推動無人機的發展。例如，陸軍設備開發部舉辦的2016年「跨越險阻」演習，旨在促進無人機的發展，演習的重點之一是「城鎮戰場的偵察和搜索」。和主辦的許多國防裝備和技術競賽一樣，這一系列競賽除傳統國有企業外，還得益於研究機構、民營企業和其他利益相關方的參與。

Beyond the development of drones for use by the PRC armed forces, certain systems are being created and primarily promoted for export to foreign militaries. This effort could make these weapon systems relevant to current and future conflicts worldwide, even those that do not involve the PLA. For instance, Tianjin Zhongwei Aerospace Data System Technology is developing a mini quadcopter, "Tianyi" for export. Tianyi is "designed to carry out both reconnaissance missions and close-range strikes against armored vehicles or individuals in an urban environment."

除開發供中共武裝部隊使用的無人機外，一些武器系統正在開發，主要是為出口外國軍隊，以因應世界當前和未來衝突，甚至是與共軍無關的衝突，例如，天津中衛航太數據系統技術有限公司正開發一種用於出口的微型四軸飛行載具「天翼」。天翼設計在於城鎮環境中執行偵察任務和對裝甲車或個人的近距離打擊。

Training Environments訓練環境

To complement its dedicated urban warfare training facilities, the PLA has been working with



Chinese technology companies to enhance the realism and impact of PLA training environments. The Beijing Aerospace Changfeng Corporation, for example, has been responsible for several technologies introduced to Zhurihe's urban warfare training ground, such as a video surveillance network and the "Joint Situation Display System" that helps improve awareness of ongoing operations. Zhurihe has also introduced a "laser simulation system" that makes it so struck troops lose their ability to attack and are identified by smoke.

為豐富城鎮戰訓練設施，軍方一直與中國的科技公司合作，以增強訓練環境的真實感和影響。例如，北京航太長豐公司已負責幾種引入到朱日和的城鎮戰訓練地面的技術，例如一個視訊監視網路和「聯合態勢顯示系統」，有助於持續作戰的感知能力。朱日和也引進一種「鐳射模擬系統」，使被打擊的部隊失去攻擊能力，並於煙霧中被識別。

Several Chinese companies also supply the PLA with battlefield simulation systems to facilitate training. For instance, Huard Technology provides a system that can simulate the impact of cities "on the effectiveness of troops' operations and equipment, creating actual weapons and ammunition explosions, personnel injury, equipment actual damage and other battlefield atmospheres." Beijing QingPu Technology Co., Ltd. has developed an "urban combat digital training environment system platform" that integrates a three-dimensional situation display, a synchronized video display, and the synchronous acquisition and storage of combat data. The PLA's National University of Defense Technology also sought to acquire an urban warfare visual simulation system as of fall 2021, but the details were limited.

幾家中國公司也向軍方提供戰場模擬系統來促進訓練。例如，華如科技提供一個系統，可模擬城鎮對部隊作戰效能和裝備的影響，創造擬真的武器彈藥爆炸、人員傷亡、裝備實際損壞等戰場氣氛。北京青雲科技有限公司開發一個「城鎮戰鬥數位化訓練環境」系統平台，整合立體情境顯示、同步影像顯示及戰鬥數據的採集和儲存。共軍國防技術學院也尋求在2021年秋季取得一種城鎮戰視覺模擬系統，但是細節有限。

Concluding Assessments總結

The PLA's history with urban warfare informs its current thinking and outlook on future operational challenges. During the Chinese Civil War, after the initial failures of the Red Army, the Red Army/PLA's capacity to learn to conquer and hold urban areas proved crucial for its eventual victory. In China's later conflicts beyond its borders, the PLA's approach to urban areas adapted, introducing coercive tactics, such as attempts to eliminate enemy troops to achieve political objectives. Beyond such historical experiences, the PLA's efforts to adapt have been influenced by studying foreign militaries, including that of the United States, and through ongoing experimentation. The continued development of training facilities, such as the Zhurihe urban warfare training ground, further supports this learning effort by providing an environment for more realistic training that can improve combat readiness.

軍方在城鎮戰方面的歷史，使我們瞭解當前其對未來作戰挑戰的思考和展望。中國內戰期間，紅軍在最初失敗後，學習征服和控制城鎮地區的能力被證明是最終勝利的關鍵。

在中國後來的境外衝突中，共軍對城鎮地區採取了變通的方法，引入強制戰術，比如試圖消滅敵軍以達到政治目的。除這些歷史經驗外，軍方調適努力還受到對國外軍隊(包括美軍)的研究以及正在進行的實驗的影響。訓練設施的持續發展，如朱日和城鎮作戰訓練場地，為更真實的訓練提供環境，可提高戰備。

As Taiwan and the United States evaluate CCP intentions and the PLA's readiness for an invasion scenario, its potential preparedness for urban warfare will be a salient consideration. At present, the PLA's prospects for success in such a contingency remain inherently uncertain. During the Chinese Civil War, the Red Army "learned about warfare in warfare", as Mao Zedong famously emphasized. By contrast, the PLA today can learn only from its study of other militaries' operations and seeks to place those lessons into practice by pursuing realistic combat training. The PLA's outlook on urban warfare is particularly informed by a close study of American debates and experiences, such that elements of its strategic thinking and approach tend to emulate or respond to these influences. Beyond the facade of confidence portrayed in CCP propaganda, the PLA may have reasons for concern about the challenges and unpredictability of operations in an urban environment.

當臺灣和美國評估中共的意圖和共軍對入侵臺灣的準備情況時，其對城鎮戰的潛在準備將是一個重要的考慮因素。目前，共軍在這種應急作戰中取得成功的前景在本質上仍不確定。在中國內戰期間，紅軍「在戰爭中學習戰爭」是毛澤東的名言，相比之下，軍方今天只能學習其他軍隊的作戰，並尋求通過真實的戰鬥訓練，將這些經驗應用到實踐中。共軍對城鎮戰的看法尤其受到美國的啟發，其戰略思想和方法傾向於模仿或響應這些影響。除中共宣傳中所描繪的自信表象外，共軍可能會擔心城鎮戰中的挑戰性和不可預測性。

As recent history has demonstrated, urban warfare is an art often unmastered by even the most experienced militaries, and the PLA's capacity to learn and prepare during peacetime remains to be tested. From training to experimentation with emerging capabilities, the PLA's improving proficiency in urban warfare and the PAP's capacity to engage in "counterterrorism" operations to force stability will be important benchmarks to consider in evaluating its modernization and readiness for potential conflict contingencies in the years to come. The PLA's apparent improvements in its preparation for urban warfare may belie notable difficulties. Potential shortcomings could include the still-limited realism of its training environments, particularly those geared toward Taiwan.

從近期的史實顯示，城鎮戰是一門藝術，縱然經驗豐富的軍隊亦往往無法掌握，共軍於平時學習和準備的能力猶有待考驗。從培訓到新興能力的試驗，共軍精進城鎮作戰的能力和武警參與反恐的能力將是重要指標。共軍在準備城鎮戰方面的積極程度可能掩蓋其困境，潛在的缺點可能包括訓練環境仍然有限，特別是針對臺灣的訓練環境。

As the PLA displays its increasing operational capabilities, including for urban warfare, Taiwan has reacted by looking to bolster its capacity for defense. Taiwan's military strategy has introduced an emphasis on "Resolute Defense and Multi-Domain Deterrence," and Taiwanese



military exercises also reflect growing concerns with these challenges. The fall 2021 iteration of Taiwan's annual Han Kuang exercises involved a simulated decapitation attack and preparations for urban warfare, electronic warfare, and cyberattacks. The Taiwanese armed forces are also building new combat training facilities that incorporate mock gas attacks, night-time combat, and urban warfare to improve troops' capacity to manage stress and demanding combat conditions. In January 2022, Taiwan's Ministry of National Defense launched a new agency, the All-out Defense Mobilization Agency, to further improve the capabilities of Taiwan's reserves. The agency was created by upgrading and expanding the existing All-out Defense Mobilization Office that had been under the ministry's headquarters. Prior to the agency's launch, it was reported that members were going to travel to the United States for talks, training, and exchanges to learn from America's experiences on the topic.

隨著軍方展示其日益增強的作戰能力(包括城鎮戰能力)，臺灣的回應是加強其防禦能力。臺灣的軍事戰略強調「防衛固守和重層嚇阻」，軍事演習也反映出對這些挑戰日益增長的擔憂。2021年秋季舉行的「漢光」演習，包括模擬斬首攻擊，以及為城鎮戰、電子戰和網路攻擊做準備，部隊也在建設新的戰鬥訓練設施，包括模擬毒氣攻擊、夜間戰鬥和城鎮戰，以提高部隊應對壓力和高要求戰鬥條件的能力。2022年1月，國防部成立「全民防衛動員署」，進一步提高後備能力，該機構是透過升級和擴大原隸屬國防部全民防衛動員室。據報導，在該機構成立之前，其成員將前往美國進行會談、培訓和交流，以學習美國在這一問題上的經驗。

Considerations and Recommendations for US Responses 給美國的注意事項和建議

To date, the PRC's approach to urban warfare and options for improving Taiwan's urban defenses have been relatively under-emphasized by Taiwan and its allies, compared to other important components of an invasion campaign. While US strategists today debate the relevance of lessons learned from the Global War on Terror for great power rivalry or strategic competition, the future conduct of urban warfare might retain enduring relevance. Urban warfare could be a central feature of the most serious scenarios that US, Taiwanese, and Chinese planners currently contemplate. The PLA's calculus will be affected by its confidence in and capability to undertake an urban offensive to seize and maintain control of Taiwan's capital and other major cities. On this front, contemporary American experiences in urban warfare are relevant, not only given the influence upon the PLA's approach but also insofar as US concepts and proficiency could be leveraged to complicate China's calculus.

迄今為止，臺灣及其盟友對中共城鎮戰的方法和改善臺灣的城鎮防禦不及其他作戰方式。雖然美國戰略家們目前在爭論從全球反恐戰爭中吸取的教訓對大國競爭或戰略競爭的關聯性，但未來城鎮戰的開展可能會持久相關。城鎮戰可能是美國、臺灣和中國的規劃者目前所設想的最嚴重情景的特徵。共軍是否有信心和能力發動城鎮攻勢，奪取並維持對臺灣首都和其他主要城鎮的控制，這將影響共軍的盤算。在這方面，當代美國在城鎮戰方面的經驗是相關的，不僅考慮到對共軍方法的影響，而且考慮到美國的概念和能力可能使中國的考量變得更複雜。

US adaptation of past practices to current challenges will demand a series of paradigm changes. American strategists and practitioners of urban warfare must start to consider the challenges of defending, rather than primarily assaulting, cities. The United States should apply the lessons it learned from urban counterterrorism and counterinsurgency operations to contingencies in which the US military could be engaged in aid and support of Taiwanese defenders against invasion by a peer adversary. The ongoing American engagement with Taiwan to bolster its capacity for defense and national resilience can continue to evolve towards improved defenses and capacity for resistance, perhaps with a greater focus on urban areas.

美國要想適應當前的挑戰，就必須改變以往的做法。美國城鎮戰的戰略家和實踐者必須開始考慮保衛城鎮，而非攻擊城鎮。美國應將其從城鎮反恐和反叛亂行動中學到的教訓應用到應急作戰中，在這種情況下，美軍可幫助和支持臺灣防禦，抵禦對手的入侵。美國與臺灣的持續接觸，可能會發展為提高防禦能力和抵抗能力，或將聚焦城鎮地區。

As concerns intensify in the United States and Taiwan on the prospects of a Chinese invasion within the next decade, these questions about urban warfare take on greater strategic importance. While there is no singular solution to these complex strategic and operational challenges, several potential options may merit consideration going forward.

隨著美國和臺灣對未來十年內中國入侵的擔憂加劇，這些與城鎮戰有關的問題具有更大的戰略地位。雖然對這些複雜的戰略和挑戰沒有單一的解決方案，但有幾個潛在的選擇可能值得考慮。

US and Taiwanese defense strategy must be informed by a sophisticated understanding of the PLA's capabilities and increasing investments in urban warfare. The expansion of training and technologies for urban warfare could be a strategic warning indicator for PRC intentions and plans towards Taiwan.

美國和臺灣的防禦戰略必須基於對共軍能力的深入瞭解和不斷增加的城鎮戰研究投資上。城鎮戰的訓練和技術的擴展可能成為中共對臺灣的意圖和計畫的預警指標。

Propaganda on urban warfare training and the demonstration of relevant capabilities will likely continue to be used, or is being used, in PLA information campaigns to undermine Taiwanese and allied resolve.

中共很可能會繼續使用城鎮戰訓練的宣傳和相關能力的展示，作為資訊戰的宣傳以破壞臺灣和其盟國的決心。

The strengthening of urban warfare training and urban defenses should be an important component of Taiwan's and its allies' overall defensive preparations. Taiwan and its partners should invest in and harden urban defenses in Taipei and other key cities as part of a successful deterrence-by-denial strategy. US military-to-military training and exchanges should continue to expand efforts to bolster Taiwan's capacity to defend major cities.

加強城鎮戰訓練和防禦，應成為臺灣及其盟國全面防禦準備的重要組成部分。臺灣



及其合作夥伴應加強投資臺北和其他主要城鎮的防禦，作為成功「拒絕威懾」戰略的一部分。美國對軍方間的訓練和交流應該繼續擴大力度，以增強臺灣保衛主要城鎮的能力。

US efforts and programs focused on urban warfare should reorient, where relevant, to concentrate on the distinct challenges of the Indo-Pacific operational environment. For instance, existing training facilities focused on urban warfare should be adapted to simulate cities of greater scale and complexity to reflect that cities in Asia are different from the cities that have been the focus of much US thinking, practice, and training on urban warfare to date. Findings could then be incorporated into joint training with its regional allies and partners.

美國側重於城鎮戰的努力和計畫應該在相關的地方重新定位，專注於印太作戰環境的挑戰。例如，現有的城鎮戰訓練設施應調整以模擬更大規模和更複雜的城鎮，以反映亞洲城鎮的不同。

In the process, the United States should make efforts to capture lessons learned about urban warfare and leverage existing institutions and communities that developed proficiency, such as the Asymmetric Warfare Group (AWG), while recognizing where current thinking must be adapted or challenged.

在這一過程中，美國應努力汲取城鎮戰的經驗教訓，利用現有機構和社區，如不對稱作戰小組，同時認識到必須調整當前的思維。

The US military can facilitate exchanges and training among allies and partners with relevant experiences in urban warfare and countering hybrid warfare, allowing for concepts and relevant practices to be shared across theaters and combatant commands. Potentially, aspects of the "Resistance Operating Concept" (ROC) developed through Special Operations Command Europe (SOCEUR), which highlights a concept of "total defense," may be relevant to Taiwan going forward.

美國軍方可以促進盟國和合作夥伴之間的交流和訓練，以獲得城鎮戰和對抗混合戰的相關經驗，允許在戰區和司令部間共用概念和相關實踐。潛在地，通過歐洲特別作戰司令部發展的「抵抗作戰概念」，強調「全面防禦」的概念，可能與臺灣未來的發展有關。

The Resistance Operating Concept is a planning guide for the United States and partner nations intended to ensure "each side speaks the same [operational] language, and they can go ahead and plan together for resistance," according to its primary author, Dr. Otto Fila. The US and Taiwanese militaries should continue to concentrate on creating countermeasures against PLA tactics and systems that are likely to be employed in future urban operations. For example, the PLA evidently intends to leverage a range of drones, from small quadcopters to unmanned ground systems, to facilitate urban operations. Experimentation with and the deployment of systems that can jam or disrupt these systems could undercut situational awareness. US arms sales to Taiwan could include such capabilities.

《抵抗作戰概念》的主要作者奧托·菲亞拉博士說，該報告是美國及其夥伴國家的計

畫指南，旨在確保「各方使用相同的『行動』語言，他們可以繼續前進，共同計畫抵抗行動」。美國和臺灣軍方應該繼續專注於建立對抗共軍的戰術和系統，這些戰術和系統可能被用於未來的城鎮作戰。例如，共軍顯然打算利用一系列無人機，從小型四軸飛行器載具到無人地面系統，以促進城鎮作戰。對干擾或破壞這些系統進行試驗和部署，可能會削弱態勢感知能力。美國對臺軍售可能包括這種能力。

Beyond ongoing educational, exchange, and training activities with regular units in the Taiwanese military, the US armed forces should also consider pursuing expanded engagement with Taiwan's reserve force of 2.5 million personnel and perhaps even Taiwan's nearly 1 million civil defense volunteers.

除了與臺灣常規部隊進行教育、交流和訓練活動外，美軍還應考慮擴大與臺灣250萬人的後備役部隊接觸——甚至可能包括臺灣近100萬志願役。

Taiwan's reserve force, if properly prepared and utilized, could be a key factor in a Taiwan scenario that results in combat in urban environments, given that it outnumbered the PLA's active force and might outnumber the force that the PLA would likely deploy in a full-fledged invasion of Taiwan. Given the reporting on perceived weaknesses in the reserve force, a focus on practical education and training by US personnel may be useful to improving both capability and morale.

臺灣的後備力量，如果得到適當的準備和利用，可成為城鎮戰中的關鍵因素，因為它的數量超過共軍的現役部隊，也可能超過共軍在全面入侵臺灣時部署的數量。鑑於報告中提到的後備部隊的弱點，由美軍協助實際教育和培訓可能有助於提高能力和士氣。

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