

# Tanks in the Surf

## *Maintaining the Joint Combined Arms Landing Team*

by Major Matthew W. Graham, U.S. Army



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Land Warfare Paper No. 147, July 2022

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## **In Brief**

- The Marine Corps divestment of tanks leaves the Army as the sole provider of medium and heavy armor available for the joint force's future amphibious operations.
- This essay explores the historical employment of Army tank units across three amphibious operations in the European and Pacific theaters during World War II and seeks to draw lessons from these campaigns for the future joint force.
- This essay concludes that, while the tank was critical to the success of multiple amphibious operations throughout World War II, it was not the decisive weapon. Instead, the decisive weapon was the combined arms team.
- Removing any of the combined arms elements results in a serious unbalancing of the team and raises the risk of failure. Furthermore, reliance on airpower and other inter-service fires to compensate has been historically detrimental.
- To ensure the future of the joint force combined arms landing team, the Army must re-energize its doctrine, training and organization around amphibious operations and, specifically, the role of armor within them. It must also further re-conceptualize how it views amphibious operations to focus on the more extensive land campaign that historically follows Army amphibious landings.

## Tanks in the Surf: Maintaining the Joint Combined Arms Landing Team

“Divestment of Tanks: We have sufficient evidence to conclude that this capability, despite its long and honorable history in the wars of the past, is operationally unsuitable for our highest-priority challenges in the future. Heavy ground armor capability will continue to be provided by the U.S. Army.”

—United States Marine Corps, *Force Design 2030*<sup>1</sup>

### Introduction

The Marine Corps has long viewed the tank as an important weapon in amphibious operations. The Marine Corps campaigns in the central Pacific during World War II demonstrate the utility of armor in securing and expanding the beachhead and ensuring the success of these landings. In addition, Marine Corps armor had an important role in *Operation Desert Storm* and in the Global War on Terror; it deployed all of their tanks to Afghanistan. However, in *Force Design 2030*, the Marine Corps has identified the tank in the current form of the M1A1 Abrams as operationally unsuitable in a potential conflict in the Pacific against the People’s Republic of China.<sup>2</sup> As a result, it has completely divested its seven tank companies and all of its M1A1 Abrams prepositioned stocks. In defense of this decision, General David Berger, the current Commandant, stated, “We need an Army with lots of tanks. . . . We don’t need a Marine Corps with tanks.”<sup>3</sup> For better or for worse, the Marine Corps will have to depend on the Army to provide both light and heavy armor capabilities in the future.<sup>4</sup>

This paper does not critique the Marine Corps’ decision to remove the Abrams tank from its inventory, seeing the decision as both a budgetary and platform-specific decision. It assumes that both the Marine Corps and Army believe that the tank, in some form, remains an essential tool of modern war and that it will still be needed in any future amphibious assault that the joint force undertakes. Now that the U.S. Army is the sole provider of armored forces within the joint force, how will the Army train for, conduct and support joint amphibious operations, especially the landing and employment of armored forces? This paper explores the historical role

of armor in Army amphibious operations by examining three case studies during World War II, specifically the Sicily, Leyte and Luzon campaigns, and seeks to draw lessons from these case studies for the future operational environment.

In the popular imagination, amphibious operations are dominated by the initial assault or landing. However, this limited focus runs contrary to the U.S. Army's historical experience. In 1950, Brigadier General David A. Ogden, Commander of the 3rd Engineer Special Brigade in the Southwest Pacific during World War II, delivered a speech at the Engineer School in which he attempted to reframe the Army's conception of amphibious operations:

The business of putting troops ashore is all over in a matter of two or three days and may only begin a land campaign. Amphibious operations, particularly those involving land masses against which the Army customarily operates, may continue for months. . . . The result of accepting the narrow definition of an amphibious operation has been to exclude from continued development and from the textbooks a vast amount of valuable knowledge and experience.<sup>5</sup>

For the Army's purposes, it is primarily concerned with the land campaign that follows an amphibious operation, not just the amphibious landing itself. As Captain, later Field Marshal William J. Slim summarized this position: "Normally, the struggle at sea will be only an essential preliminary to decisive attack on the enemy's vitals by land and air forces, which, conveyed and supported by the Navy, will deliver the final blows."<sup>6</sup>

### *Scope and Purpose*

This paper will focus on the historical employment of Army tank units in amphibious assaults of World War II. First, it will examine the role that non-amphibious armor played in the campaign on Sicily in 1943, on Leyte in 1944, and Luzon in 1945. Second, it will briefly analyze what historical lessons the Army can learn from these operations that are applicable in the current and future operational environment. These case studies were selected because of the similarities that these operations—and the conditions under which they occurred—have with potential future operational environments.

This study seeks to fill an existing knowledge gap in how armor was employed in Army amphibious operations and what lessons can be learned from these experiences for the present and future. Additionally, it aims to energize further research into the Army's amphibious heritage. Finally, it will advocate for the codification in doctrine of previous lessons learned, thus helping to ensure that the Army will be able to employ armor as part of the joint amphibious landing force.

### *The Army in the Maritime Environment*

With an increasing focus on the Indo-Pacific Theater, the Army finds itself in an environment where other services maintain historical and doctrinal primacy. DoD Directive (DoDD) 5100.01, *Functions of the Department of Defense and Its Major Components*, appoints the Marine Corps as the joint force proponent for amphibious operations. It also requires the U.S. Army to conduct amphibious operations.<sup>7</sup> However, the Army has not conducted a large-scale amphibious assault since Korea. Furthermore, the Army has lacked its own amphibious doctrine since the retirement of Field Manual (FM) 31-12, *Army Forces in Amphibious Operations*, instead relying on joint doctrine.

## **Armor in Joint Amphibious and Forcible Entry Operations Doctrine**

Joint Publication (JP) 3-02, *Amphibious Operations*, is the governing document for all amphibious operations of the joint force. Present doctrine identifies five types of amphibious operations: assault, raid, demonstration, withdrawal and support.<sup>8</sup> Like other forceable entry operations, amphibious operations are inherently joint and require oftentimes immense cooperation by air, land and sea forces. JP 3-02 further states: “Armored elements provide substantial combat power and mobility for the landing force.”<sup>9</sup> Related to JP 3-02, JP 3-18, *Joint Forcible Entry Operations*, identifies forcible entry as “operations to seize and hold lodgments against armed opposition. A lodgment is a designated area in a hostile or potentially hostile operations area (AO) (such as an airhead, a beachhead, or combination thereof) that affords continuous landing of troops and materiel while providing maneuver space for subsequent operations.”<sup>10</sup> JP 3-18 makes no specific mention of the role of armor or tanks within a JFE operation.

## **Current Army Doctrine**

Current Army doctrine is significantly lacking in any mention of amphibious operations or armor’s employment in them. The primary Army manuals covering armored operations include: Army Technique Publication (ATP) 3-20.15, *Tank Platoon*; ATP 3-90.5, *Combined Arms Battalion*; FM 3-96, *Brigade Combat Team*; Army Doctrine Publication 3-0, *Unified Land Operations*; and FM 3-0, *Operations*. They only mention amphibious operations in passing, as part of a forcible entry operation: “A forcible entry operation can be by parachute, air, or amphibious assault. The Army’s parachute assault and air assault forces provide a formidable forcible entry capability. Marine Corps forces specialize in the amphibious assault; they also conduct air assaults as part of amphibious operations.”<sup>11</sup> Most concerning at the tactical level, ATP 3-20.15 (Marine Corps Reference Publication 3-10B) does not mention any planning considerations or tactics, techniques or procedures (TTPs) for employing tanks during landing operations.

FM 3-99, *Airborne and Air Assault Operations*, and ATP 3-21.20, *Infantry Battalion*, mention amphibious operations 37 times. These manuals treat planning and conducting amphibious operations similarly to airborne and air assault operations. While airborne and air assault operations share similarities with amphibious operations, the complexity and level of joint planning necessary for amphibious operations far exceeds the complexity of these other operations. Interestingly, FM 3-99 only mentions armor in passing, stating, “close air support often can compensate for the lack of armor and heavy artillery.”<sup>12</sup> Stated another way, doctrine suggests airpower can and will make up for the lack of armor. However, this may not always be the case due to the weather, higher priority missions and the increasing lethality of air defense and area denial systems—as was the case during the Leyte campaign.

Clearly, then, current Army doctrine focuses little on amphibious operations and treats armor employment within these operations, in general, as similar to airborne and air assault operations. This could be due to the difficulty of deploying armor and the Marine Corps doctrinal primacy in amphibious operations. However, the coming adoption of the mobile protected firepower (MPF) system could change this dynamic.<sup>13</sup> The ability of the U.S. Army in World War II to have mobile, protected and expeditionary armored platforms available for its campaigns in Sicily, Leyte and Luzon was a decisive factor in the success of each. Therefore, a historical analysis of the tank’s employment in these operations is worthwhile as the U.S. Army seeks to understand how armor systems could be used effectively in future amphibious operations.

## **Analysis of Armor in the Sicily Campaign**

An analysis of the Sicilian campaign demonstrates the effectiveness of tanks, even in small numbers, during the initial phases of an amphibious operation. The ability to deploy tanks with the initial waves helped secure the gains made by the initial assault infantry but also demonstrated some of the challenges of massing armor in the beachhead. The Axis counterattack against the Seventh Army beachhead at Gela on the second day of the invasion represents one of the few times that a major armored counterattack occurred against an amphibious landing within the first hours of the operation. The rapid armored counterattack against light infantry without effective antitank weapons or indirect fire support remains one of the greatest threats to amphibious assaults. The presence of a platoon of tanks from the 2nd Armored Division, operating in support of the 1st Infantry Division, while not decisive in defeating the counterattack on their own, significantly contributed to the defeat of the Axis counterattack.

The difficulty of delivering armor to shores demonstrates how challenging the first hours of a landing can be. Even significant planning, preparation and rehearsal cannot account for the chaos of battle. If armored support had not been present, Soldiers from the 1st Infantry Division would have had to depend entirely on air and naval fires to defeat the counterattack. These two factors may not be reliable or present in future operations. Thus, the actions of a single platoon of tanks had an outsized effect in helping to defend the beachhead against an armored counterattack.

While important in the defense, armor also had a momentous role in the breakout and expansion of the beachhead. Armor's ability to apply mobility, shock and firepower to exploit gaps created by the assault infantry and supporting fires allowed them to rapidly attack and seize objectives farther inland, as seen in the actions of the 66th Armored Battalion's rapid advance inland to Nora. Armor's unique combination of protection, mobility and firepower enabled, more so than any other unit, the expansion of the beachhead, and it contributed significantly to the rapid success of the overall campaign.

Overall, the tank played a significant role in the success of the invasion of Sicily. Tanks contributed to the protection of the beachhead against armored counterattacks. Because of their mobility, firepower and armored protection, they could rapidly exploit the surprise and shock achieved by the landings to advance inland toward operational objectives. The assault, defense and expansion of the beachhead would have been significantly more challenging if armored units had not been present.

## **Analysis of Armor in the Leyte Campaign**

On the other side of the world, the employment of armor in the Philippines constituted the most significant employment of armored units by both sides during the Pacific War before the Battle of Okinawa. The operations on Leyte saw the dual employment of conventional tanks in small actions and, in one case, a full battalion action. An analysis of tank actions during the Philippines campaign highlights the tank's importance to the success of the follow-on land campaign, even in restricted and very restricted terrain.

Effective infantry-armor cooperation during amphibious operations was the single most important lesson of the Leyte operation. As noted in several after-action reports, two factors continually affected this coordination: leaders' attitudes toward tanks and the level of tank-infantry training before the operation.<sup>14</sup> First, as one infantry battalion commander expressed,

“From my experience, the use of tanks under extreme conditions of weather and areas of tropical vegetation is hardly worthwhile.”<sup>15</sup> Opinions such as this demonstrate a lack of understanding both of the tank’s capabilities and employment methods, despite existing doctrine. The second issue was a lack of tank-infantry training. The long distances and dispersed nature of the Pacific Theater limited the ability of units to conduct combined arms rehearsals before operations. This severely impaired the development of mutual trust and understanding between tank battalions and their assigned infantry divisions. For example, the Leyte invasion fleet deployed from three separate departure points, each over 1,200 miles from the invasion beaches at Leyte Gulf and several hundred miles from each other.<sup>16</sup> However, some units did have experience and training at the Division level before deployment to the theater.<sup>17</sup> Unfortunately, this training often focused solely on the landings, not on actions farther inland. As a result, the increased coordination and even understanding of the tank’s capabilities were often underdeveloped in the minds of commanders, despite the encouragement of doctrine.<sup>18</sup>

On Leyte, the inability to develop land-based airpower and the commitment of the Navy to a major engagement during the initial phases of the operation deprived the landing force of important air support. This increased the dependence on the other elements of the combined arms team, including the tank. It is an interesting thought exercise to envision an amphibious operation like Leyte occurring without tanks. One must wonder how successful and potentially costly such a campaign would have been. It is without doubt that the capability and willingness to deploy tanks, during an amphibious assault in anticipation of the follow-on land campaign, significantly contributed to the victory on Leyte. In the coming battle for Luzon, this capability would prove central, as the combined arms landing force would find itself again battling the Japanese on the plains of Luzon and in the streets of Manila.

### **Analysis of Armor in the Luzon Campaign**

On Luzon, armor was used to rapidly expand the beachhead and defend the landing force from enemy armor and infantry attacks. Following the defense of the beachhead against an ineffective Japanese armored counterattack, armor units were able to spearhead the rapid advance of the 37th and 1st Cavalry Divisions south along Highways 3 and 5. Armor on Luzon struck targets inland through the employment of speed, mobility and firepower. This was clearly exemplified by the 1st Cavalry Division’s “flying columns” rapid advance on Manila. Additionally, armor proved key during the battle in Manila, particularly the government district and the Intramuros.

There was a hope among many armor units that the wide Luzon plain would afford them the opportunity for tank on tank battles more characteristic of the armored clashes of the European theater. Instead, they engaged enemy tanks in strong defensive positions, routed out enemy snipers and machine-gun nests and undertook some of the most intense urban combat seen since Stalingrad. They had to do so while operating off extended ship-to-shore logistics lines and while supporting infantry units that often did not understand how to employ them. They operated dispersed in platoons and companies, with limited centralized control from their parent units. Yet, these armor units rendered invaluable service to the infantry they supported. Perhaps, like no other campaign in the Pacific, Luzon is a prime example of an amphibious operation that only began a much longer land campaign and one that further highlights the importance of the tank in combined arms warfare, especially in urban terrain.

## **Findings and Recommendations**

After analyzing these historical case studies, it is clear that the qualities of the tank have an essential place in amphibious campaigns. The tank is a critical member of the combined arms landing force; it was central to the success of amphibious campaigns in both the Mediterranean and Pacific Theaters during World War II. Without the tank's ability to provide mobile protected firepower, the Sicilian and Philippine campaigns would have been much more costly in terms of time, blood and treasure. The tank's primary role was to rapidly exploit the success of the landings and expand the beachhead, securing objectives far inland from the initial amphibious objective area. Its secondary role was to support other elements of the amphibious landing force during the initial assault through direct fire. While tanks played an important role in initial landings in both the Mediterranean and Pacific Theaters, tanks were not the decisive factor in the success of the initial landings. Instead, tanks truly shined after coming ashore in the later waves of an amphibious assault and during the subsequent land campaigns.

The tank's ability to bring mobile, protected firepower to the landing beaches helped ensure the success of the landings on Sicily. Armor's ability to rapidly advance out of the beachhead and secure key terrain ensured that the Allies retained the initiative and ultimately the victory in Sicily. Likewise, the ability of tanks to subsequently mass and generate shock against the Japanese defenders in the battle of the Dulag-Burauen-Dagami Road allowed U.S. forces to advance inland rapidly and to secure important airfields.

However, along the Dulag-Burauen-Dagami Road, we saw the failure of combined arms. The failure of the infantry to keep pace with the armor and to protect it in the restricted terrain of Leyte caused a loss of initiative and resulted in the battle on 25 October 1944, where U.S. forces had to pay for the same ground twice. The key factor in these mistakes was the poor understanding of the tank's capabilities on behalf of infantry commanders and vice versa.

## **The Importance of Combined Arms**

The importance of the combined arms team was on display again in Manila. The balanced tank-infantry-artillery team was able to drive the Japanese from their urban pillboxes and strongpoints. At the same time, air support played only a small role due to concerns regarding potential civilian casualties. It is important to note that the introduction of tanks and artillery into the urban fight for Manila also made a key difference in limiting U.S. casualties.

Overall, while the tank was employed in multiple amphibious operations throughout World War II, it was not the decisive weapon of those landings. Instead, the decisive weapon was the combined arms team. The ability to envision and effectively employ the various elements—infantry, armor and artillery—was key. Removing any of the combined arms' elements resulted in a serious unbalancing of the team—and often in failure. Furthermore, in these moments of imbalance, the dependence on airpower and other inter-service fires proved unreliable. The balanced combined arms team, supported by proper planning and training, was the key to success on Sicily, Leyte and Luzon.

## **Implications for the Army in the Maritime-Dominated Environment**

In the future, the Army could find itself engaged in theaters where the ability to project power inland from the sea offers substantial operational and tactical advantages to Army commanders. As demonstrated during the Sicily and southwestern Pacific campaigns, the ability of Army forces to prosecute an extensive land campaign following an amphibious landing is

a critical capability, thus making amphibious operations not solely the purview of the Navy or the Marines. While the Army lacks the doctrinal responsibility for amphibious operations, it should not and cannot abdicate its responsibility to consider or conduct amphibious operations as part of the joint force. The new FM 3-0, scheduled for publication in the fall of 2022, is an important step in reclaiming the Army's amphibious heritage. Chapter 6, "Army Operations in Maritime-Dominated Environments," is a good starting point for changing how the Army thinks about its role within joint amphibious operations. By highlighting their historical importance and the role of armor within them, this paper seeks to contribute to reshaping the Army's conceptualization of amphibious operations. A deep familiarity and understanding of amphibious operations once allowed the Army to seize, retain and exploit the initiative, maneuver to positions of relative advantage against peer competitors and extend operational reach. It can again.

### **Training, Doctrine and Organization**

With the removal of tanks from the Marine Corps' combined arms teams, it will fall to the Army to provide this necessary component. Without Army doctrine or dual-use Marine-Army doctrine to support this, junior and mid-grade leaders will have to relearn old lessons at the expense of blood and treasure. The key to preventing this is training. Army armored units must be able to train with and be employed by the Marine Corps and vice versa. Placing an Army Tank Battalion or company afloat with a Marine Expeditionary Unit and conducting joint training at Camp Pendleton or Camp Lejeune with tanks from the 1st Armored Division or 3rd Infantry Division could go a long way in the development of Army TTPs for armor support to amphibious operations. However, there are numerous logistical and platform-specific impediments to this training, primarily the limited availability of ship-to-shore movers and the weight of the current Abrams tank. Thus, the Army should look to field additional mobile protected firepower tank battalions in place of Cavalry Squadrons within all of its infantry brigade combat teams.

Furthermore, the Army should train for amphibious assaults and other amphibious operations using its own Army watercraft systems and as part of the joint force. U.S. Army Pacific and its assigned units are the most logical place to begin training amphibious operations again. Ideally, this training would take place with Navy and Marine Corps elements.

To address the current gap in tactical doctrine, the Army should move to codify specific doctrine related to the use of armor in amphibious operations. The Office of the Chief of Armor should work to identify and track former Marine Corps armor officers who elected to transfer into the Army. These officers should help write and publish specific sections or appendices to the existing Combined Arms Battalion, Tank Company and Tank Platoon FMs and other doctrinal publications that address the employment of armored forces in amphibious operations. The Army should work with the Marine Corps to actively harvest its years of lessons learned to form the basis of an Army TTPs manual on the subject. Finally, the Army should further incorporate planning for Army amphibious landings into the joint operations blocks of instruction at the Command and General Staff College. This would highlight the complexity of amphibious operations to student officers while allowing greater integration between Army and Marine Corps elements. This part of the scenario could be overseen by the Marine Corps element within the department of joint-interagency military operations to ensure synchronization of joint and Marine Corps landing doctrine.<sup>19</sup>

## Conclusion

Some see the contemporary conflicts in Nagorno-Karabakh and the Russo-Ukrainian War as the harbingers of the tank's death.<sup>20</sup> The tank has been here before. A similar argument was advanced after the stunning defeat of unsupported Israeli Armor by Egyptian forces during the Yom Kippur War in 1973,<sup>21</sup> and when unsupported Russian armor drove into Grozny in 1995.<sup>22</sup> Despite claims that the tank is analogous to the outdated battleship of the 20th century, the fact remains that the tank, or, more importantly, the qualities of the tank, are key to the success of the combined arms team and critical to the success of any offensive operation.<sup>23</sup> The tank's qualities of shock, mobility and protected firepower make it essential to the effectiveness of combined arms, especially in amphibious operations, as this analysis has shown. While anti-tank guided missiles and drones have changed battlefield dynamics and increased the need for a recapitalization of antiair and antitank guided missile defensive technologies, the simple fact remains that the tank will continue to evolve and endure as a member of the combined arms team.<sup>24</sup> When employed as a member of a balanced combined arms team, the tank, in whatever form it may take next, will continue to play a key role in future amphibious operations.

*This paper is derived from the author's Master of Military Art and Science thesis, Tanks in the Surf: Army Armor in Expeditionary Amphibious Operations During World War II, which can be found at the Command Arms Research Library at Fort Leavenworth, KS. While this paper focuses the discussion on application to contemporary warfare, the original thesis delves deeper into the historical precedents set by the three case studies discussed herein.*

## Notes

- <sup>1</sup> United States Marine Corps, *Force Design 2030* (Washington, DC: U.S. Government Printing Office, 2020), 8.
- <sup>2</sup> Michael R. Gordon, “Marines Plan to Retool to Meet China Threat,” *Wall Street Journal*, 22 March 2020.
- <sup>3</sup> Gordon, “Marines Plan to Retool to Meet China Threat.”
- <sup>4</sup> United States Marine Corps, *Force Design 2030*, 8.
- <sup>5</sup> David A. Ogden, “Amphibious Operations of Especial Interest to the Army,” lecture before the Engineer School (Fort Belvoir, VA: Engineer School, 1951), 2–3.
- <sup>6</sup> W.J. Slim, “On Amphibious Warfare,” *Army Quarterly and Defence Journal* (July 1928): 237–60.
- <sup>7</sup> DoD, DoD Directive (DoDD) 5100.01, *Functions of the Department of Defense and Its Major Components* (Washington, DC: U.S. Government Printing Office, 2020).
- <sup>8</sup> Joint Chiefs of Staff, Joint Publication (JP) 3-02, *Amphibious Operations* (Washington, DC: U.S. Government Printing Office, 4 January 2019), I-3–4.
- <sup>9</sup> JP 3-02, II-11.
- <sup>10</sup> Joint Chiefs of Staff, JP 3-18, *Joint Forcible Entry Operations* (Washington, DC: U.S. Government Printing Office, 2018), vii.
- <sup>11</sup> Department of the Army (DA), Field Manual (FM) 3-0, *Operations* (Washington, DC: U.S. Government Printing Office, 2017), 1-25, 6-2.
- <sup>12</sup> DA, FM 3-99, *Airborne and Air Assault Operations* (Washington, DC: U.S. Government Printing Office, 2015), 4–5.
- <sup>13</sup> Chris Stone, “MPF and the Division,” *Fort Benning TV*, 8 March 2022, video, 31:37, <https://www.youtube.com/watch?v=WTILyG-QPPw>.
- <sup>14</sup> Committee 16, “Armor on Leyte,” 103.
- <sup>15</sup> Ibid.
- <sup>16</sup> Daniel E. Barbey, *MacArthur’s Amphibious Navy: Seventh Amphibious Force Operations 1943–1945* (Annapolis, MD: Naval Institute Press, 1969), 366.
- <sup>17</sup> Sixth United States Army, “Report of the Luzon Campaign, 9 January 1945 – 30 June 1945,” 26. Of note, the 7th Infantry and 1st Cavalry had prior combat experiences. The 7th Infantry and 96th Infantry divisions both conducted full-dress practice landings on Maui, in the Territory of Hawaii, in September 1944. However, these landings did not cover actions inland, and instead focused on the assault landing only.
- <sup>18</sup> DA, FM 17-36, *Employment of Tanks with Infantry* (Washington, DC: U.S. Government Printing Office, 1944), 1.
- <sup>19</sup> Lieutenant General Robert E. Coffin, USA, Ret., “Letter to the Editor,” *Army History*, no. 30 (Spring 1994): 38. In his letter, LTG Coffin explains that, during his time at the Command and General Staff College in 1950, this type of relationship existed in airborne and amphibious training.
- <sup>20</sup> Nick Reynolds and Jack Watling, “Your Tanks Cannot Hide,” *Royal United Services Institute*, 5 March 2020.
- <sup>21</sup> Jonathan House, *Toward Combined Arms Warfare* (Fort Leavenworth, KS: Combat Studies Institute, 1984), 180.

- <sup>22</sup> Kendall D. Gott, *Breaking the Mold: Tanks in the Cities* (Fort Leavenworth, KS: Combat Studies Institute Press, 2006), 86.
- <sup>23</sup> David Johnson, “The Tank is Dead. Long Live the Javelin, the Switchblade, the . . . ?” *War on the Rocks*, 18 April 2022 .
- <sup>24</sup> John Spencer and Harshana Ghoorhoo, “The Battle of Shusha City and the Missed Lessons of the 2020 Nagorno-Karabakh War,” *Modern War Institute at West Point*, 14 August 2021.



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