The Air Mobility Obsession

Why the US Army Should Stand Down its Three "Airborne" Divisions

James Hasik
+1-512-299-1269 | jhasik@jameshasik.com

The US Army today maintains more than three divisions of troops ostensibly devoted to two inessential and hazardous missions, and with inconsistent capability. As the recent experience of the Russo-Ukrainian War has made yet more clear, mass insertions by parachute or helicopter are things of the past. At the same time, the Army cannot recruit enough troops to fill the ranks of its desired force structure. It is therefore time to do away with the three "airborne" divisions—11th, 82nd, and 101st—and redeploy their troop strength to more pressing missions.

The History: Fiascos, then Nostalgia.

As Marc DeVore has notably written, the multinational experiments with large formations of parachutists in the Second World War were mostly fiascos. The Germans, Soviets, Americans, and British collectively undertook ten parachute assaults with each more than 3,000 troops (effectively, more than a brigade). Of those, only two—the Anglo-American drops in Provence in August 1944 and over the Rhine in March 1945—can be considered successes that were not pyrrhic. That is, drops like the German assault on Crete in May 1941 and the American assault on Normandy in June 1944 achieved their objectives, but resulted in so many casualties amongst the attackers so as to render the formations ineffective for a long time thereafter. Indeed, the Germans never attempted another large drop, even during their subsequent invasion of the Soviet Union.[1]

Large groups of parachutists were then used occasionally after the Second World War, but in generally smaller operations. In October 1950 and March 1951, the US Army's 187th Airborne Regiment (a brigade-sized unit) twice dropped during the Korean War. In October and November 1956, single battalions of the Israeli Paratroopers Brigade twice dropped during the Sinai War. In February 1967, a single battalion of the US Army's 173rd Airborne Brigade jumped as part of Operation Junction City, an effort to destroy the Viet Cong Division northwest of Saigon. Alongside that battalion, another eight infantry battalions from the 1st and 25th Infantry Divisions moved by helicopter, in one of the largest heliborne assaults of the war. In May 1978, the French 2nd Foreign Parachute Regiment (a battalion-size unit) dropped against lightly-armed rebels in during the Battle of Kolwezi in Zaire. More French, Belgian, and pan-African troops subsequently entered the country through the airport which the French captured. None

of these operations were fiascos, in the first place because the drop zones were known in advance to be lightly defended.

Since then, the only large-scale cases have been the US invasion of Panama in 1989, in which the US Army dropped the equivalent of two brigades of troops; and the multinational invasion of Iraq in 2003, in which the Army dropped a single brigade.[2] These operations were also successful. In both cases, the threat to the aircraft and their passengers was low. In neither case was the insertion operationally necessary. The outcome of neither campaign was in serious doubt, because other means of entry provided adequate access. In 1989, the Navy could have landed by sea all the Marines needed to supplement those Army troops already in the Canal Zone. In 2003, the mechanized movement from Kuwait to Baghdad was the decisive thrust of the campaign. Even so, in both cases, a single battalion of parachutists could more safely have secured a landing zone for follow-on insertion of light infantry and heavier artillery by transport aircraft—as was accomplished in Grenada in 1982.

DeVore's aforementioned work was very important, but he only reviewed airborne (parachuting) forces, not heliborne forces. His analysis should be extended now, because lately, helicopters have also faired poorly against moderately serious opponents. In November 2001, the campaign in Afghanistan was assisted by the long-distance movement of Marines from the assault carrier USS *Peleliu* to capture an airfield outside Kandahar, but the battlefield was sparse and the Taliban had no real antiaircraft weapons. In 2003, the Army's raid on Karbala with 31 AH-64 Apache helicopters of the 11th Attack Helicopter Regiment met such stiff resistance from the Iraqi Republican Guard that every aircraft sustained battle damage, and two were shot down. Afterwards, the Army "significantly restricted" all helicopter operations, and cancelled all further air assaults. During the campaign, the Marine Corps suffered damage to 46 of its 58 AH-1 Cobra helicopters, "mostly from infantry-type weapons, such as machine guns, RPGs, and small arms fire."[3] Thus too did the Marines move their infantry almost entirely by truck and armored amphibious tractor, as the threat of Iraqi air defenses was deemed unworthy of the advantage of aerial mobility. Such was the threat assessment when the Iraqis really did not have functioning surface-to-air missiles, after so many years of an international arms embargo.

Against more serious enemies, inserting troops by parachute or helicopter has become foolhardy. The Russo-Ukrainian War has made this very clear.[4] The initial Russian airmobile assault on the Hostomel airport was repelled substantially by hastily mobilized Ukrainian reservists hurriedly armed with portable anti-aircraft missiles, who destroyed two of the ten helicopters in the first wave.[5] Russian reinforcements in fixed-wing transports were then waved off, and the airfield was retaken by Ukrainian mechanized troops. Subsequently, helicopters from both sides have approached the battle lines around Ukraine, but only rarely crossed them. As portable air defense missiles become more widely available, no better should be expected in future campaigns.

The Force Structure: Tortuous Constructs and Cognitive Dissonance.

As DeVore has written, the long-term persistence of multiple divisions of airborne forces after the war in the US Army and the Soviet Army can be explained by the political power of alumni of these formations amongst the general officer ranks. The same might be said of the Israeli Army. Its Paratroopers Brigade may be legendary, but not for parachuting, having not undertaken a significant combat drop in over six decades. Today, the Chinese Air Force appears to maintain an airborne corps with multiple brigades, but its actual aerial mobility is unclear. In the military establishments of these countries, nostalgia for these formations, and a willingness to avoid asking difficult questions about their suitability and survivability, have helped maintain paratroopers as a large percentage of their ground forces. At the same time, the lesser influence of parachutists in the British Army has led to the retention of but a single brigade.[6] Like Britain, France maintains a single brigade, with a single battalion ready for immediate service. No other nation maintains a larger force of actual paratroopers, and most actually lack the aircraft needed to drop more than a company or so at once.

In contrast, some military attitudes towards helicopters have been changing. Even before the present Russo-Ukrainian War, the US Marine Corps had chosen to reduce its investment in attack helicopters, scaling back the force to just five squadrons and fewer than 100 AH-1Z Super Cobra aircraft, and half that many accompanying UH-1Y utility helicopters. The US Air Force similarly understands the danger of modern air defenses to rotorcraft, recently notifying the Congress of its intent to truncate its new rescue helicopter program at 75 aircraft. If that service worries how even stealthy fighters and bombers will penetrate enemy air defenses, then how will helicopters?[7]

The US Army may have shifted its viewpoint of late, with its recent decision to replace its utility helicopters with longer-range tilt-rotors, similar to but more advanced than those of the Marines. The Bell V-280 tilt-rotors, procured through the Future Long Range Assault Aircraft (FLRAA) program, offer roughly twice the combat range and ferry range of the aircraft they will replace. They could prove rather more useful than helicopters in ferrying troops towards the sparse battlefields of Eastern Europe and over the long distances of Western Pacific. The Army seems not to expect that they will actually penetrate meaningful air defenses, as might be encountered over Eastern Europe. While helicopters may be more suitable for low-altitude flight, flying large formations of helicopters that way would be foolhardy.

More so, the Army's divisional aviation brigades are today designed more for attack than assault. Since their uniform reorganization in 2018, all eleven of these brigades are equipped with 48 attack helicopters (AH-64E Apaches) and 24 fixed-wing drones: 12 MQ-1C Grey Eagles for attack and 12 RQ-7 Shadows for reconnaissance. Each brigade also has 12 heavy cargo helicopters (CH-47E Chinooks) and 38 utility helicopters (UH-60 Black Hawks), but the latter type must also tend to command and medevac duties. That number of Chinooks and Black Hawks is thus sufficient to lift, in a single movement, only a reinforced infantry battalion.

We might then wonder about the Army's thinking on these matters, because the service still maintains three of its twelve divisions as airborne and heliborne troops, for little essential need, considerable real hazard, and inconsistent capability. The driving nostalgia is revealed by the Army's inconsistency in labeling. To begin, its 101st Division, based in Kentucky, is neither airborne nor airmobile. The 101st has not been actually airborne since losing its parachuting

role immediately after the Vietnam War. The Army signals its more recent role in the parenthetical statement routinely attached to its name: "(Air Assault)," the Army's parlance for heliborne. However, since 2015, the 101st Airborne has not been particularly heliborne either, as it has had but a single aviation brigade, like any other division in the Army. The Army's leadership has considered restoring a second aviation brigade to the 101st Division, perhaps by 2027, so that it can lift an entire brigade of infantry at once.[8] Of course, there is little likelihood that any division should find itself doing so. The concentration of so many aircraft above landing zones would create too lucrative a target set.

The 82nd Airborne Division, based in North Carolina, is decidedly airborne, with three brigades of parachutists, one of which stands ready for world-wide deployment on short notice. In theory, the Air Force could drop the entire division at once, as its force of over 200 C-17 Globemaster III transports can each deploy about 100 paratroopers. More practically, in bringing the 82nd's artillery, ammunition, and a small force of comparatively light, air-droppable armored vehicles, the Air Force could drop much of the division. Perhaps oddly, the 82nd Division's aviation brigade is organized just as the Army's ten others, with roughly 100 helicopters that cannot themselves be airdropped.

Today, the 82nd Division also lacks air-droppable armored vehicles, except its Joint Light Tactical Vehicles (JLTVs) with anti-tank missiles. Until 1997, the 82nd Division had a battalion of sixteen-ton M551 Sheridan tanks, deemed "Armored Reconnaissance/Airborne Assault Vehicles." In 1996, the Army undertook program to replace these with a newer design, the eighteen-ton M8 Buford tank, deemed an ""Armored Gun System," from what is now BAE Systems, but cancelled it in 1996 before serial production had begun. In 2018, the 82nd Division acquired a second-hand company-set of LAV-25A2 wheeled armored vehicles from the Marine Corps, for air-droppable mobile firepower, though not a great improvement in anti-tank capability.[9] That is because in 2022, the Army selected General Dynamics' Griffin II, a development of its Austro-Spanish ASCOD armored vehicle series, as a 38-ton tank to support its otherwise light infantry brigades. This vehicle, deemed a "Mobile Protected Firepower" system is too heavy for airdrop.[10] The Army could have chosen a competing offer from BAE Systems, based on the air-droppable M8, but did not.[11] Note that the Sheridan, the Buford, and the Griffin are all tracked, armored vehicles equipped with turreted, large-caliber cannons. Remarkably, the Army has insisted on not calling any of these vehicles *tanks*, in a long-standing, intra-service, doctrinal argument about what can and cannot be a tank.

For artillery support, American paratroopers do have the benefit of air-droppable, though comparatively short-range, 105 mm howitzers, and these can be towed behind Humvees or JLTVs. However, as with all paratroopers, their ammunition must be airdropped as well, in necessarily small quantities. To improve the value of every shot, the Army could attempt to develop a rocket-boosted, precision-guided 105 mm round, to greatly extend the range and accuracy of the weapon, simultaneously conserving its scarce ammunition at a landing zone. At least one munitions manufacturer, Italy's OTO Melara, has demonstrated the concept in a 76 mm round. The Army, however, seems to have shown no public interest in doing so. All this means that the airborne artillery should expect to be outranged and outgunned in any fight against a strong opponent.

The Army's separate 173rd Airborne Brigade, based in Italy, is also a fully parachuted-trained formation. The Army also maintains the brigade-sized 75th Ranger Regiment, yet another fully parachute-trained unit. The Rangers are designed for smaller insertions, seizing objectives for follow-on movement of inbound forces. Like the 82nd Division, the 75th Regiment also maintains a ready unit for immediate deployment worldwide.

The recently re-established 11th Airborne Division, based in Alaska, is a different construct: a formation of two brigades, one airmobile ("air assault") and one airborne.[12] The parachute brigade was a recent addition, but a questionable one, as no such formation should find itself parachuting onto frozen tundra without overland logistical support. Even so, training an entire brigade of Alaskan parachutists brings to six the number of fully airborne brigades in the US Army: three in the 82nd Division, one in the 11th Division, the separate 173rd Brigade, and the brigade-sized 75th Regiment.

The airmobile brigade of the 11th Division was until recently a motorized brigade, mounted on Stryker 8x8 armored vehicles.[13] Exchanging a motorized brigade for an airmobile one seems reasonable, as the Strykers did not perform well in the extreme cold. For better ground mobility than the Strykers offered, the division will soon be receiving BvS10 Beowulf Cold-Weather All-Terrain Vehicles from BAE Systems Hägglunds of Sweden.[14] The Beowulf is an amphibious vehicle that can transport up to 14 troops or eight tons of cargo, and when unloaded, can be airlifted by Chinook or C-130 Hercules fixed-wing transport.

Both modalities are useful, because in Alaska, most long-range movement of people is by air, and most long-range movement of cargo is by sea. For air mobility in defense of the state, the 11th has an organic aviation group that is smaller than the aviation brigades of the other division, with 12 CH-47 Chinooks, 20 Blackhawks, and 12 Apaches. For sea mobility in this role, we might ask why the Army, or perhaps more appropriately the Alaska National Guard, does not maintain a flotilla of coastal transport ships, with seakeeping characteristics appropriate for the far north.

Further, if the newly-nicknamed "Arctic Angels" division needs an "arctic ethos," as their new division commander explains, why not the straightforward name Arctic Division, or Alaska Division?[15] Such nomenclature would describe the organization in a manner in keeping with its purpose. After all, misnaming formations can perpetuate strategic misimpression. On careful analysis, none should think that the Army had a strategically relevant airborne capability. Observing how the Army names three of its twelve divisions could induce confusion, leading to zealousness for aerial assaults against well-defended positions in discussions of strategy. If the issue is one of ethos or morale, the Army can readily find other ways of instilling *esprit de corps* in its troops than with a shoulder patch signifying a mission that they will not undertake.

All of this indicates persistent, institutionalized, cognitive dissonance within the US Army about its airborne forces, and frankly all its formations. Three of the Army's twelve divisions are numbered first: 1st Infantry, 1st Armored, and 1st Cavalry. Their organizational structures are nearly identically those what the service terms a *heavy* division. The nomenclature is again a matter of nostalgia: most notably, the cavalry division does not function entirely as individual cavalry squadrons (reconnaissance battalions) do. In addition to the airborne divisions, the

Army maintains a fourth light division, the 10th Mountain, but it has no particular mountain warfare capability, and is indeed based on comparative flat terrain in Upstate New York. All eight heavy divisions combine tank, mechanized infantry, and artillery battalions—though none are actually called *artillery* divisions.

The Way Forward: Surface Mobility and Missiles

That is notable because discussions of artillery—field, coastal, and air defense—consistently feature in discussions of a possible war with Russia, and almost dominate discussions of war with China. To begin, consider how valuable the combination of automated aerial surveillance and the High Mobility Artillery Rocket System (HIMARS) has proven against the Russians in Ukraine. No troop concentration, airfield, munitions dump, or supply point is safe within 70 kilometers of a HIMARS launcher.[16] As Stephen Biddle showed in his analysis and description of the "modern system" of combined arms warfare, this prevents the Russians from effectively concentrating force. This is turn greatly complicates any further offensives, and even effective resistance to Ukrainian advances.[17] Note also how the "anti-navy" of Ukraine has chased the surface ships of the Russian Black Sea Fleet to the eastern reaches of those waters with nothing more than truck-based missile launchers, reconnaissance drones, and unmanned attack boats.

Next, consider a possible war with China: no one can seriously propose that American troops should storm Chinese beaches, and that American tanks would then drive to encircle Shanghai or Beijing. Recognizing the maritime and defensive nature of such a war, the Marine Corps has partially shifted towards an artillery-centric model, organizing three Marine Littoral Regiments (MLRs), each of an infantry battalion, an air defense battalion, and a precision missile artillery battery of HIMARS and anti-ship missiles. A future development of the MLR could benefit from a full battalion of missile artillery.[18] For its part, the Army leadership publicly acknowledges that air and missile *defense* should be bigger priorities today than light infantry.[19] What it has not done is organize a suitable "Army of the Pacific," formed around long-range, precision artillery; and with light armored motorization appropriate for road networks of much of the Pacific Rim.

Such an emphasis would draw on American strengths in information technology and automotive manufacturing, while mitigating American problems in demographics. Labor shortages caused by resignations and retirements across the civilian economy have made alternatives to military service very attractive. Low birthrates and political resistance to expanding immigration mean that this problem will probably persist. The US Army is experiencing severe and probably lasting recruiting problems, with only about nine percent of 16 to 21-year-olds expressing interest in joining.[20] The service is now about 20,000 troops short of its planned "end-strength" (as the Pentagon terms its staffing goal) of 475,000. Even with all the Army's manpower overhead, that number would be about enough to staff half a division. The Congress has already decreased the Army's authorized end-strength to 452,000 for fiscal year 2023, but the Army is not sure that it can retain more than 445,000.[21] The Army seems to have no firm plan for how to react to these demographic and recruiting challenges.[22] Even so, the Army has about 45,000 troops—ten percent of this number—trained as parachutists.[23]

As Blake Herzinger recently wrote, the people of the United States need to decide whether they want "a large army, or a modernized one, because that is the consequential decision before them."[24] More political scientist than policy analyst, Marc DeVore did not advance his aforementioned argument to its logical conclusion. Faced with the secular changes described above, the United States should protect the core power of the Army, and not its peripheral functions.[25] Seconding Herzinger, I too propose the modern option, emphasizing the combined-arms formations that have mattered most in land warfare over the past century, and the precision weaponry that has been emerging over the past few decades to matter the most now.[26]

Simply put, the Army should stand down its three airborne divisions. If the recruiting crisis can be abated, as many as five of the six infantry brigades in the 82nd and 101st Divisions could then be reassigned to the five of the Army's remaining ten divisions that have but two "maneuver" brigades (those with tanks and infantry), rather than the preferred three. If the crisis persists, the Army can preferentially eliminate those brigades, rather than understaffing mechanized brigades across the service.

An Arctic Division should remain in Alaska, but with an emphasis on cold-weather warfare, and without the costly overhead and distraction of airborne training for half the formation. All heavy divisions should be renumbered (*e.g.*, 1st Division) or renamed (*e.g.*, Arctic Division) without misleading branch monikers. Fort Campbell and Fort Bragg, homes today to the 82nd and 101st, may remain valuable as installations, and could receive combined-arms formations in a base realignment, with enough armor, motorization, and precision artillery to matter on a modern battlefield against a serious enemy. The composition of those mechanized, combined-arms formations can be debated. Stephen Biddle's work, for example, argued that the US Army's heavy formations have too many tanks in comparison to their armored infantry.[27] Recent developments may argue for more missiles and fewer howitzers in the artillery.

What is less needed is unsupported infantry, and their large-scale parachuting capability will not be missed. As a critical case, enthusiasts for parachute forces sometimes highlight the possibility for rapid reinforcement of a treaty ally in the immediate aftermath of an invasion. Should, say, one or more of the Baltic Republics face a Russian attack, the ready brigade of the 82nd Airborne Division could drop into friendly territory, and then march forward to join the fight. In theory, this capability would be available even if all available airfields have been captured by the enemy.[28] This scenario, however, begs the question of the casualties that such a large force of transport aircraft, and their concentrated passengers would face, from Russian air defense missiles. To this tactical problem, nearby tilt-rotors would offer a better solution, with shorter reaction time, greater dispersion of forces, and better capacity for low-altitude ingress. This suggests a continuing function for the 173rd Brigade, though as an air- and road-mobile force, and hopefully based in Poland or the Baltics themselves, rather closer to the potential front than in Northern Italy.

At the same time, in each combined-arms division, the Army can still maintain enough helicopters to move a battalion of infantry at once, as is done today, but rather as high-speed backstops, in support of the overall mechanized force.[29] That role could be reserved for a dedicated, heliborne, light infantry unit, but need not be. After all, in the Marine Corps, infantry

are expected to know how to fight from armored vehicles, out of helicopters, and of course on foot. For context, note that each of the Navy's ten assault carriers embarks a squadron of twelve MV-22 Osprey tilt-rotors, and each of its amphibious flotillas (unhelpfully similarly called "squadrons") of three ships embarks a combined-arms battalion of infantry, armored vehicles, and (mostly) infantry. Each of those can transport 24 marines at once. A single lift is thus 288 troops, rather short of the full battalion. Over water, enough air cover from fighters and accompanying air-defense ships may clear a lane for their safe movement. Once over land, the situation becomes far more questionable, which suggests how modern aero-amphibious assaults should be geographically circumscribed. As in the Army, the bulk of the Marine Corps will move by surface, as it must. In the future, when it moves, it will move substantially for its artillery.

With less hubristic intentions and investments, the Army can then rely on its Ranger Regiment and its Special Forces for those smaller airborne insertions. With some freed-up, parachute trained infantry, Army could further bolster the 75 Regiment with a few more battalions, so that one is always ready. We might even call them a brigade, with their own brigadier-ranger-general, if necessary. And if it is important, they can still wear a coveted cap-badge.

James Hasik is a senior fellow in the Defense Technology Initiative at the Center for European Policy Analysis in Washington, DC. He holds a PhD in public policy from the University of Texas at Austin, and an MBA in applied economics from the University of Chicago.

---

[1] Marc R. DeVore, *When Failure Thrives: Institutions and the Evolution of Postwar Airborne Forces*. Fort Leavenworth: Army Press, 2015. His earlier working paper, *The Airborne Illusion: Institutions and the Evolution of Postwar Airborne Forces* (MIT Security Studies Program, 2004), inspires a name for this essay.

[2] *Ibid*.

[3] John Gordon IV *et al*., *Assessment of Navy Heavy-Lift Aircraft Options*, DB-472, Santa Monica: RAND, 2005.

[4] Sash Tusa, "Opinion: The End Of Air Assault?" *Aviation Week & Space Technology*, 10 May 2022.

[5] Mykhaylo Zabrodskyi *et al.*, *Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022*, Royal United Services Institution, November 2022, p. 26.

[6] Marc R. DeVore, 2015, *op. cit*.

[7] Steven Losey, “Air Force rethinks combat rescue for major war — but what will it look like?” *Defense News*, 11 July 2022; and “Inside the US Air Force’s race to fund future fighters, bombers and autonomous drones before the next crisis,” *Defense News*, 9 May 2022.

[8] Matthew Cox, “After Almost 5 Years, Army's 101st Airborne Will Return to Full Air Assault Power,” *Military.com*, 16 October 2019.

[9] Joseph Trevithick, “Army’s Newest Airborne Unit Gets Second-Hand But Air-Droppable USMC LAV-25 Armored Vehicles,” *The Drive*, 29 October 2018.

[10] Zamone Perez, “New Army light tank under construction,” *Army Times*, 29 December 2022; and Kris Osborn, “Army to Buy 500 New ‘Light Tank’ Mobile Protected Firepower Vehicles,” *Warrior Maven*, Center for Military Modernization, 26 November 2018.

[11] Ethan Sterenfeld, “Murray: One MPF prototype potentially airdrop-capable,” *Inside Defense*, 21 June 2021.

[12] Steve Beynon, “New Army 11th Airborne Division Gets Stand Up Date, Force Outline,” *Military.com*, 18 May 2022.

[13] Steve Beynon, “Alaska Gets Rid of Strykers as Brigade Shifts to Air Assault,” *Army Times*, 20 September 2022.

[14] Jen Judson, “BAE Systems wins US Army deal for Cold Weather All-Terrain Vehicle,” *Defense News*, 22 August 2022.

[15] Davis Winkie, “How—and why—the 11th Airborne Division is being resurrected in Alaska,” *Army Times*, 25 May 2022.

[16] Stephen Kalin and Daniel Michaels, “Himars Transform the Battle for Ukraine—and Modern Warfare,” *Wall Street Journal*, 8 October 2022.

[17] Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle*, Princeton: Princeton University Press, 2004.

[18] T. X. Hammes, “Adapt Marine Littoral Regiments for the Surveillance Era,” *Proceedings of the United States Naval Institute*, November 2022.

[19] Davis Winkie, “Army may restructure brigade combat teams amid recruiting woes,” *Army Times*, 29 July 2022.

[20] Comment by Army Secretary Christine Wormuth at the 2022 Association of the United States Army conference in Washington DC.

[21] Davis Winkie, “Can the Army fill its ranks?” *Army Times*, 26 December 2022.

[22] Davis Winkie, “An end strength crisis is here for the Army,” *Defense News*, 10 October 2022.

[23] Kyle Jahner, “Does the Army need airborne?” *Army Times*, 29 February 2016.

[24] Blake Herzinger, "The Budget (and Fleet) that Might Have Been," *War On The Rocks*, 10 June 2021.

[25] Richard Rumelt, "Strategy in a 'structural break'," *McKinsey Quarterly*, 2009, no. 1.

[26] For the retrospective analysis, see Biddle, *op. cit*. For an early view of how technology would further change warfare, see Michael R. Rip and James Hasik, The Precision Revolution: GPS and the Future of Aerial Warfare, Naval Institute Press, 2002.

[27] Biddle, *op. cit*.

[28] See the argument by Lieutenant General Ben Hodges in Winkie, "Does the Army Need Airborne?" *op. cit*.

[29] Davis Winkie, "Air Cav is back in vogue—new units, class waitlists and more," *Army Times*, 23 May 2022.