

Basic Infantry Building Block

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Information technology has become so important in defining military power that it overwhelms almost everything else. ... The front line really is disappearing from war. Armies must hide. Concealment and deception become their normal operating status. Victory goes to the side having more influence over technology and better access to the world's electronic infrastructure.

—Bruce Berkowitz, *The New Face of War*

Bruce Berkowitz was almost right. However, if anything, the wars in Iraq, Afghanistan, and Syria have shown us that access to better technology and a robust electronic infrastructure are simply not enough, and will not be at least for some time in the future. While technology—information technology in particular—and access to electronic



infrastructure are important, they are not decisive. Standoff weapon systems and extensive use of technology are making us forget a basic tenet of war: war is a human endeavor. It stems from human interests and emotions, and it is driven by them.

This article will focus on the basic building block of the infantry, the rifle squad, in terms of its capabilities, survivability, combat power, and employment on the battlefield. It will consider the history of the squad; discuss some alternative approaches to squad organization, equipping, and tactics; and consider the impacts of new technology on the infantry squad.

Historical Origins of Squad Composition and Its Role on the Battlefield

We can trace units as small as a modern infantry squad all the way back to the Roman legion. There, a *contubernium* was composed of eight legionaries who shared a tent and provided a basic building block of a century.¹ However, a *contubernium* was not an independent fighting unit, and its leader only performed administrative duties.

A modern squad first appeared during the First World War. Automatic weapons on the battlefield, with their massive volume of fire, caused a stalemate on the western front that the traditional infantry formations of the time were unable to break. At the same time, the relatively heavy weight of the first machine guns prevented infantry squads from moving quickly around the battlefield. However, this changed when the Germans introduced a light machine gun into the infantry. Now, small groups of infantry organized around a light machine gun could attack an objective and succeed. The squad became the basic tactical unit.

Based on this experience, Western armies reorganized their infantries and built infantry squads around light machine guns or automatic rifles.² But, from the very start, a question arose regarding employment of an infantry unit built around a light machine gun: Should it only be expected to form a base of fire element or a maneuver element;

New Jersey Army National Guard soldiers from Company C, 1st Battalion, 114th Infantry (Air Assault) do a practice run 9 April 2018 before executing a live-fire battle drill on Joint Base McGuire-Dix-Lakehurst, New Jersey. (Photo by Master Sgt. Matt Hecht, U.S. Air National Guard)

or, could it perhaps conduct both tasks simultaneously? In the years after World War II, different approaches and theories dealt with the question of a basic infantry unit and its mission. However, these arguments lost precedence in professional discussions because armies as a whole were becoming increasingly complex, expensive, and limited in manpower.³ Most Western armies were concerned with the squad's ability to maneuver under fire, in preparation for a final assault on enemy positions. However, there is another approach to a squad's employment on the battlefield, a way that we should study.

Key Battlefield Considerations in Determining a Basic Infantry Unit

As we consider what a basic infantry unit (BIU) should look like, we must first consider what it must be capable of achieving. In Western armies, the commonly accepted notion is that the infantry squad's role is to close with and destroy the enemy. It does this across the full spectrum of operations by maneuver to seize an objective with the intent of holding ground.⁴

The initial appearance of gunpowder and explosives on the battlefield led to ever-increasing lethality of weapons. Units engaged against increasingly sophisticated guns and explosives were forced to disperse more as well as to more often act in the absence of close and direct contact with other friendly units.⁵ This characteristic is even more prevalent today with the use of modern high explosive and precision munitions. These force armies to consider smaller tactical units and even greater dispersion, to the point where a unit or an individual no longer represents a cost-effective target for highly accurate explosive munitions.

On the other hand, psychology suggests the extreme importance of physical contact among fellow soldiers in combat.⁶ Physical contact as a component of unit cohesion and morale is even more important to success than shooting accuracy.⁷ Moreover, RAND research points out many advantages of having larger basic

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combat units such as greater resilience, better fire-and-movement techniques, and conduciveness to organization into assault, support, and security elements.⁸

Other key characteristics of the modern battlefield to consider when determining the characteristics of a BIU are the increasing importance and use of technology, the complexity and variety of operating environments, and civilians along with many other competing actors on the battlefield. Finally, as we analyze the basic infantry building block, we must also consider politico-economic constraints put on the armed forces in terms of cost-effectiveness.

Defining the Basic Infantry Unit in Western Armies

The composition of infantry units and the process of forming infantry squads varies significantly among NATO members.⁹ Three distinct examples follow of how BIUs are determined and organized in three different NATO alliance armies.

The U.S. Army squad. For the U.S. Army, “the infantry squad fire team is designed to fight as a team and is the fighting element within the infantry platoon. ... Currently, there is only one type of infantry squad and its primary role is a maneuver or base-of-fire element.”¹⁰ The U.S. Army also breaks down fire teams into pairs of soldiers called “buddy teams.”¹¹ Within U.S. Army squads there are two balanced fire teams.¹² Either team can serve as a base-of-fire or maneuver element. At the platoon level, we also find a weapons squad, which has the primary purpose to “provide the base of fire for the platoon’s maneuver.”¹³

The Slovenian Armed Forces squad. The second example of infantry squad organization is the Slovenian Armed Forces (SAF) infantry squad as defined by the SAF squad leader manual.¹⁴ The squad’s mission is to destroy or disable enemy soldiers, weapon systems, and materiel. The SAF infantry squad is the smallest unit of the infantry, and it does not subdivide further. Only in extreme circumstances would it conduct independent fighting.¹⁵ However, there are several types of infantry squads (e.g., rifle, reconnaissance, and machine gun).

The French army squad. The third example is a French army infantry squad. It is composed of two fire teams based on the effective range of their weapon systems—a three hundred-meter team and a six hundred-meter team—and a vehicle crew.¹⁶ The French

army organizes its infantry squads around three-man cells, with the option of attaching specialists to them. Depending on the source, the composition of dismounted teams varies from two three-man teams to a three-man team and a four-man team. A squad leader is in charge of the two dismounted teams and the vehicle crew.¹⁷ The French army considers the squad a BIU, as the cells are specialized based on their role in the fight and therefore incapable of independent action.

The above examples all describe infantry squads with a strong inclination for fixed organizational solutions and firepower. However, some would argue there is another way to organize low-level tactical units.

Squads in Eastern Armies

Eastern armies, up until the end of the Cold War, lacked the modern military technology available to Western armies.¹⁸ However, this did not mean they were unable to counter Western military power. Although Eastern armies were unable to project military power globally, they were able to counter Western technological and firepower advantages on their own ground through excellent tactical execution and unique organizational solutions at the lowest tactical level.¹⁹

The Iranian army squad. If we look at the Iranian infantry squad from the Iran-Iraq war (according to H. John Poole), we see a squad composed of a squad leader, a sniper, a two-man rocket-propelled grenade team, and three four-man fire teams with automatic rifles. What is notable is the lack of a machine gun to provide covering fire.²⁰ This implies a different approach to fighting, one that emphasizes surprise and mobility over firepower. What is also of note is the size of the squad, with sixteen members in six elements. As this is over the limit of what is generally considered a manageable span of control, these squads have to be fairly independent and well rehearsed in their execution.

The People’s Liberation Army squad. Another example is the Chinese People’s Liberation Army (PLA) infantry squad. Information is scarce on this unit, but one source from a professional discussion forum indicates the PLA squad has nine or ten men organized into three cells.²¹ Of note is a rather large number of antiarmor weapons and the unbalanced nature of squad elements (in terms of manpower and weapon systems) in a PLA squad.

Eastern Way of War

Simulated retreats and set-piece battles have always characterized the Eastern way of war. Eastern armies prefer to choose when and where to fight, and they rely on stealth and surprise instead of firepower. They also tend to disengage from battle when they determine that victory is out of reach.²² Their tactical approaches vary considerably and are too numerous to go into detail here. However, they do not necessarily draw a clear distinction between guerrilla warfare, war of maneuver, and positional warfare. In fact, they can conduct guerrilla and war of maneuver at the same time. Based on the teaching of Mao Tse-tung and Taoist philosophy, they can transfer between different war styles with relative ease. Unlike their Western counterparts who “move to the sound of guns,” Eastern commanders exhibit a larger degree of patience, environmental adaptability, planning, flexibility, and common sense, even at squad level.²³

Eastern armies are advancing in technology and firepower. Tactical excellence coupled with technological parity has the potential to shift the balance of military power away from the West. Perhaps the West should incorporate some Eastern techniques to maintain its advantage.

Balancing Competitive Requirements

Between 1946 and 1966, U.S. Army studies were designed to provide the answer to what the optimal U.S. Army squad would look like.²⁴ Due to the changing definition of the squad over time, the results of the studies can be difficult to compare, but they give us a good reference when we try to determine the key requirements for a BIU. Overall, the studies evaluated the BIU using the criteria of control, sustainability, flexibility, and lethality.

Control. The 1946 Infantry Conference determined that a squad leader has difficulty in controlling an element greater than nine men, even when assisted by another noncommissioned officer. The conference also determined that the nature of infantry combat precludes the effective use of subordinate teams. As a result, a squad was expected to either fire or maneuver, but it could not be expected to do both.²⁵ The 1966 Infantry Rifle Unit Study determined that control is best facilitated by a one-to-four or one-to-five leader-to-led ratio.²⁶ It is generally accepted that a commander can control up to five active subordinates. However, removing squad leaders from leading fire teams (changing the ratio

to one-to-two) increases their ability to make timely decisions and have a greater impact than if they have to simultaneously control the actions of a fire team.²⁷

Attrition. A squad must be small enough for the squad leader to control but at the same time big enough to absorb casualties. Squads of less than seven cannot take a casualty and continue the fight. If this happens, it is considered better to reorganize the platoon into fewer squads and adapt tactical employment accordingly.²⁸ Having less than nine men prevents squads from conducting fire and maneuver. It was also established that an infantry squad in combat would routinely operate at less than its authorized strength due to various reasons, not only because of battle casualties.²⁹ Therefore, the doctrinal size of BIU should in some way account for all types of attrition.

Firepower. To effectively conduct fire or maneuver, the squad needs suppressive firepower of an organic light machine gun (LMG). But, there is a point where too many machine guns limit a squad's ability to conduct other tasks. Thirty percent of squad personnel equipped with an LMG was determined as a maximum. The best combination of weapons for a squad was determined to be a single LMG for point and area suppression and a single grenade launcher for area suppression together with assault rifles for close combat.³⁰ While LMGs and grenade launchers are useful for seizing and holding terrain (the BIU's primary purpose), when it comes to close combat, the automatic rifle is queen. Therefore, a BIU should have a clear preponderance of automatic rifles. Traditionally, individual riflemen also carry additional ammunition for the platoon or the section support weapons, so it is better to keep the number of supporting weapons in a squad to a minimum to effect greater squad maneuverability.³¹

Contrary to the above findings, the current U.S. Army consensus view remains that the optimal squad is a nine-man squad composed of two balanced teams. However, according to Timothy Karcher, this is more a result of personnel and budget constraints outside of the U.S. Army control than recognition of optimal organization.³²

Vehicle space. Another important factor in infantry unit organization is vehicle space. Soldiers often accept vehicle space as it is provided without ever questioning the doctrinal effects and tactical sensibility of it. The vehicle space should not determine the size of a BIU; rather, it should be the other way around. A unit's size is determined by its doctrinal purpose.

Armies tend to offset the shrinking size of a squad with an increase in firepower. However, increasing firepower means increasing the amount of equipment at the squad level, which means “the loss of even one soldier in the squad puts an ever increasing physical burden on those that remain.”³³ The extra burden is believed to be somewhat offset by an assumption today that infantry squads will always be closely linked to their vehicles, which can provide greater firepower as well as medical evacuation capabilities. Thus, when operating with a vehicle, infantrymen can carry lighter loads.

Vehicles are undoubtedly a combat multiplier. They provide greater mobility, protection, and firepower (in terms of volume, range, precision, and lethality); better command, control, communications, computers, and intelligence; and additional capacity to transport supplies and equipment. However, once dismounted, the infantry in close combat cannot always rely on vehicle support. Moreover, dismounted infantry is very sensitive to attrition and cannot always maneuver effectively when separated from the vehicle.³⁴ The dismounted element should be optimized for close combat, as dismounted infantry is supposed to fight when the vehicle is not able to—in close combat.

Technology. As it stands today, new technological enablers for the infantry require proper maintenance and training to employ them in addition to the standard infantry equipment a soldier already has.³⁵ However, it is essential for technology not to take away from the individual soldier’s capabilities in close combat, but to enhance them. If the infantryman has to worry about battery life, excessive weight, and the possibility of equipment damage or malfunction, and if it takes away from his cognitive ability to be aware of his surroundings, the technology has no place in the infantry. As noted by Victor Sattler and M. O’Leary, “The key factor in developing and extending network support to the infantry soldier is to balance the additional skill requirements and cognitive demands such that they do not become primary responsibilities in and of themselves.”³⁶

Technology improvements provide both opportunities and vulnerabilities. For example, food processing and water storage advancements are very welcome, as they take away overall equipment weight. Likewise, unmanned ground systems in the logistical support role could unburden the infantryman by lightening his load to a manageable 25–30 kilograms. GPS locators in those

unmanned ground systems and unmanned aircraft systems could assist the infantryman by providing information or following the squad with logistic support. Self-driving/autonomous vehicles could reduce the requirement for drivers and therefore allow for more dismounts in a vehicle. At the same time, advancements in information and remote control technology could reduce the need for dedicated gunners and machine gunners, allowing for additional dismounts. Advancements in weapon design such as around-the-corner shooting could increase protection and lethality.

On the other hand, energy requirements of all electronic devices represent an Achilles’s heel, as they bind infantry soldiers to supply lines and energy sources (e.g., a vehicle or a base) more than anything else does. At the same time, the cyber and space domains are playing an increasingly important role. Information technology has the capability to allow greater dispersion of individual soldiers and teams, through the so-called “social media effect” on the battlefield.³⁷ However, as all information-based technology is vulnerable to cyberattacks, there is an issue with what happens if or when such an attack is successful. How will soldiers who are unconsciously dependent on information technology perform in the absence of it?

Notwithstanding, near-term advances in technologies will not significantly change the nature or character of combat operations, nor will the basic weapons within the BIU change significantly. New weapons systems may make the individual soldier more lethal, but the BIU will continue to conduct fire and maneuver. But, there is potential for changing the way a BIU approaches combat situations. Information technology might not result in a reduction of actual numbers of soldiers. It will, however, allow for more independent and dispersed actions of a BIU and its elements. In this way, it will contribute to the lethality and survivability of the BIU.

Robotization of the Basic Infantry Unit

On the other hand, robotization has the potential to reduce the number of soldiers in a BIU (if we assume robots do not count as soldiers). However, robots can bring with them many legal and moral issues that are similar to those encountered in unmanned aircraft systems, but made far more complex in close combat situations as described in the 2014 Combat Studies Institute publication *Robots on the Battlefield*.³⁸



At the same time, a potential exists to start treating the individual soldier as an “information gatherer and gun platform” rather than a warrior. As Poole puts it, “all the high-tech systems are not really making the individual soldier better; rather they are making him an extension of higher headquarters. Instead of making him more adaptive, innovative, and attentive to his soundings, they are making him passive.”³⁹

Battle Drills Are Not Tactics

A BIU must be able to fire and maneuver to execute battle drills. First introduced into the U.S. Army during World War II, battle drills have since spread to most Western armies to different degrees, so much so that they have come to symbolize tactics at the lowest tactical level. It is interesting to note that the 1946 Infantry Conference opposed the concept of battle drill as stereotyped tactics. But, battle drills as such are not a flaw, rather a first step. Battle drills are an effective tool for trained infantrymen in short intense battles usually with plenty of outside supporting fire. But, they can only work over very short distances and in very short, intense engagements. There are,

A Slovenian Armed Forces machine-gun squad conducts live-fire training in 2015 at the Central Firing Range and Training Area (OS-VAD) Postojna-Poček, Slovenia. (Photo courtesy of Slovenia Armed Forces, 1st Brigade, 10th Infantry Regiment)

however, a whole spectrum of situations that do not fall into this category, and a BIU must use tactical options, not drills, in response to them.⁴⁰ This requires the BIU leader to read the ground, anticipate likely enemy moves, and actively control the deployment of firepower and assault elements to meet threats.

A Proposed Basic Infantry Unit

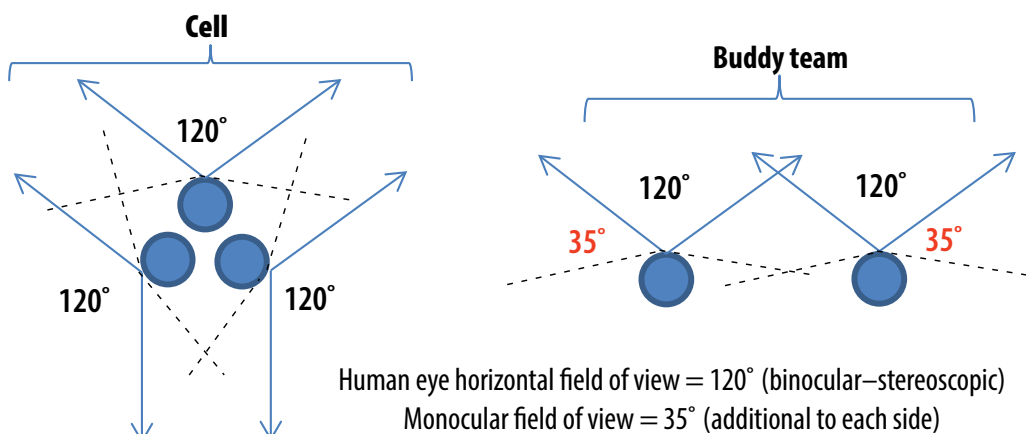
We saw above how different armies define a BIU. But, as these definitions of an infantry squad are somewhat confusing and limiting, a better definition of the BIU should be in terms of its capabilities. Therefore, the BIU should be defined as *the smallest unit capable of independent action for the purposes of seizing and holding an objective in close combat in any operation or environment*. The essential capability of the BIU is to conduct independent maneuver.⁴¹

Based on the above findings, a more flexible organization of the BIU is required and possible. The BIU should be either smaller or organized in a fashion that allows dispersion and rapid convergence. It should also be organized so it has both a small footprint in crisis-response operations and a big punch in high-intensity warfighting. Political and economic factors will always play a role, but as the BIU is the base of an army's fighting power, it should be optimal in organization, not minimal. If an army fails at the BIU level, no amount of battalions, brigades, and divisions will do the job, as they will all be hollow units. In doctrinal terms, we must move away from fire and maneuver in close combat as the primary task of the BIU. Rather, we must view it as one of the tasks—not necessarily the most difficult or the most important. We must also take into consideration the results of the U.S. Army's research in the 1950s and 1960s, and we must link these findings to what we can learn from the Eastern way of war.

The current buddy-team system should be replaced by three-man cells. Sattler and O'Leary observe that "with a minimum of three, the soldiers share the core tasks of movement, readiness to provide covering fire for the moving soldier and maintaining surrounding situational awareness to the limit that that may affect the assault group's intended actions."⁴² Three soldiers can better cover 360 degrees than two can (see figure 1). This is important on modern noncontiguous battlefields where the danger is all around. In addition, a three-man cell is better capable to deal with attrition.⁴³ The three-man cell also has the ability to operate more independently when required.

But, a cell cannot be a BIU since it does not have a capacity to seize and hold terrain in close combat. Several specialized cells would form a BIU: a command cell, a support-by-fire cell, and two assault cells, totaling twelve men (see figure 2, page 81).⁴⁴ The BIU leader

would be required to control the maximum of five individual elements (the other three cells and the two rifleman of his cell), which is within manageable limits. The fire support cell would be controlled by the BIU second in command. The BIU should not organically subdivide into predetermined fire teams but should be composed of cells as primary building blocks. The command cell would also provide security and, when necessary, rein-



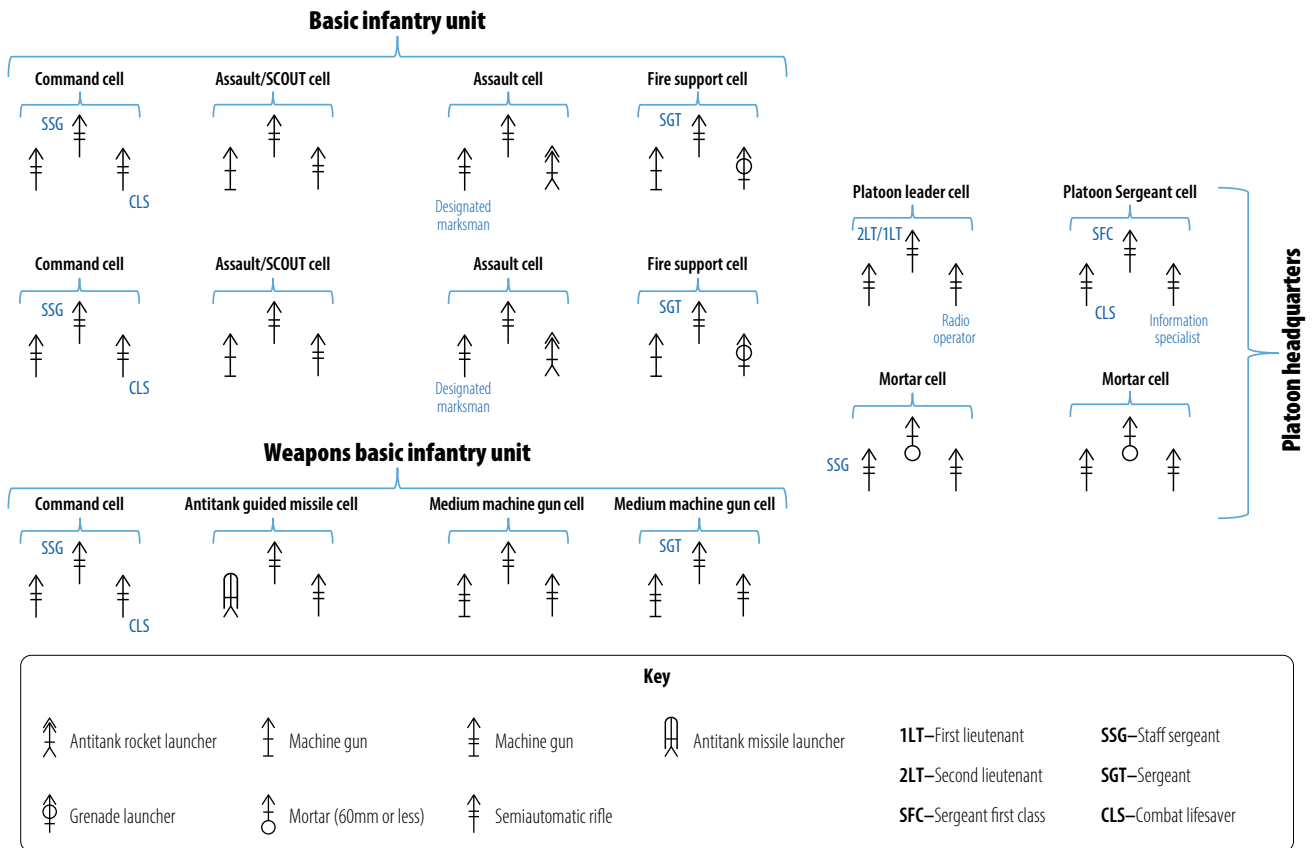
(Graphic by author)

Figure 1. Fields of View

forcement to the other cells. The command cell should not be used for reconnaissance purposes because there is a high risk that the squad leader will be pinned down and unable to control the maneuver of the remainder of the BIU. Instead, one of the assault cells should be used for that purpose when necessary.

When necessary, such a unit could form fire teams. The teams would be unbalanced, but this would not considerably degrade the BIU's capability to maneuver by teams. However, it would allow the BIU leader more flexibility in his tactical options, either by reinforcing the support-by-fire cell or an assault cell, depending on the tactical situation. While using two balanced teams might be the optimal solution for a BIU conducting a direct assault on enemy position, it makes sense to have unbalanced/specialized teams for any other tactical approach.⁴⁵

The proposed twelve-man BIU would be able to absorb considerably more casualties without markedly degrading its combat effectiveness.⁴⁶ It would also enable better distribution of additional weight, which is considerable in the modern combat load.⁴⁷



(Graphic by author)

Figure 2. Platoon Organization with Proposed Basic Infantry Units

In terms of firepower, the proposed BIU would have two LMGs, a grenade launcher, and seven rifles, not counting the BIU leader and his second in command. In addition, one rifleman would be equipped with an antitank weapon (see figure 2). As the number of supporting weapons (LMGs, grenade launcher, and antitank weapon) is 30 percent of the BIU, it is at the maximum limit for supporting weapons. Above all, the number of automatic rifles makes such a BIU lethal in close combat.

Proposed Platoon Reorganization

Accepting the proposed BIU, the U.S. Army and all those armies with the same or similar organizational solutions should also rethink their current infantry platoon organization of a platoon headquarters section, three rifle squads, and a weapons squad. The current U.S. Army doctrine states, “the infantry weapons squad provides the primary base of fire for the platoon’s maneuver.”⁴⁸ However, contrary

to this, a U.S. Army platoon leader will often distribute weapons squad elements among the rifle squads based on the tactical situation. For this reason, instead of three infantry squads and a weapons squad, a platoon might be better served with two BIUs and a weapons BIU. Doctrinally, there is no need for the third BIU, as the platoon leader could employ the weapons BIU in a fire support role while one of the infantry BIUs maneuvers to the objective and the second provides reserve or reinforcement.

The weapons BIU could also be based on four cells: a command cell, an antitank cell, and two medium machine gun cells (see figure 2). The antitank cell should be equipped with a Javelin-type antitank guided weapon. Bearing in mind that the primary mission of the weapons BIU would be to provide a base of fire for the platoon’s maneuver, it is of course somewhat less capable of independent action, especially due to its heavier equipment. However, it could still maneuver independently in a manner similar to the

BIU, with the two medium machine gun cells providing a base of fire while the antitank cell (without the antitank weapon systems) and command cell could maneuver to the objective.

Mortars could also be assigned at the platoon level, providing the platoon leader with responsive fire support and making the platoon far more independent on the battlefield. (A downside to this might be the inexperienced platoon leader's inability to command and control two BIU's, a weapons BIU, and a mortar section.) The platoon headquarters could also be based on cells: a platoon leader cell, a platoon sergeant cell, and two light mortar cells (see figure 2, page 81). Here, the platoon sergeant would have the additional assignment of conducting the platoon fight in the information domain with the assistance of an information/media technology specialist.⁴⁹ This is another important

capability that has to be introduced at the platoon level, as today's fight can be perceived as won or lost in the media regardless of the actual battle results.

One major drawback to this proposal is that such a platoon would consist of forty-eight soldiers. This number is incompatible with a four-vehicle standard for a platoon. The largest personnel carriers in use have space for only ten dismounts, which would mean the platoon has to be cut down to that number. The proposed platoon composition is therefore only suitable for a light infantry unit with truck support, or if the platoon will never conduct a mission as a whole but will always be tailored to the mission with the rest staying behind as a ready reserve. Or, the platoon headquarters element could be cut to one cell comprising the platoon leader, the platoon sergeant, and a rifleman (preferably the information/media specialist). ■

Notes

Epigraph. Bruce D. Berkowitz, *The New Face of War: How War Will Be Fought in the 21st Century* (New York: The Free Press, 2003), back cover.

1. Benjamin J. Nagy, "Maniple to Cohort: An Examination of Military Innovation and Reform in the Roman Republic" (master's thesis, Command and General Staff College, Fort Leavenworth, KS, 2014), 31, accessed 8 February 2018, <http://www.dtic.mil/dtic/tr/fulltext/u2/a611719.pdf>. A century was composed of eighty men in ten contuberniums.

2. Paul E. Melody, "The Infantry Rifle Squad: Size Is Not the Only Problem" (monograph, Fort Leavenworth, KS: School of Advanced Military Studies, 1990), 3, accessed 8 February 2018, <http://www.dtic.mil/dtic/tr/fulltext/u2/a225438.pdf>.

3. Victor Sattler and M. O'Leary, "Organizing Modern Infantry: An Analysis of Section Fighting Power," *Canadian Army Journal* 13, no. 3 (Autumn 2010): 23–53, accessed 8 February 2018, http://regimentalrogue.com/blog/caj_vol13.3_06_e.pdf. As Canadian army officers Sattler and O'Leary put it, "The development of the section [squad] structure seems to have been done more in the context of the new equipment that required manning than in the larger, coherent review of the infantry battalion as a fighting system in an operational context."

4. *Ibid.*

5. Robert C. Johnson, "Fighting with Fires: Decentralized Control to Increase Responsiveness" (monograph, Fort Leavenworth, KS: School of Advanced Military Studies, 2000), accessed 8 February 2018, <https://www.hsdl.org/?view&did=727039>.

6. Robert H. Scales Jr., "The Army and the Future of Irregular Conflict (transcript of presentation)," *Warfare in the Age of Non-State Actors: Implications for the US Army*, eds. Kendall D. Gott and Michael G. Brooks (Fort Leavenworth, KS: Combat Studies Institute Press, 2007), 258.

7. *Ibid.*

8. John Gordon IV et al., *Comparing U.S. Army Systems with Foreign Counterparts: Identifying Possible Capability Gaps and Insights from Other Armies* (Santa Monica, CA: RAND Corporation, 2015), 80.

9. *Ibid.*, 77–82. The RAND study established that infantry squads are not standardized and may have from eight to thirteen members, subdivided into two or three teams. They also have different names and different structures, depending on the country of origin.

10. Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad* (Washington, DC: U.S. Government Publishing Office [GPO], 2016), 1-11 to 1-12.

11. As the name suggests, a buddy team is composed of two soldiers who cooperate and rely on each other on the battlefield.

12. Each fire team is composed of a team leader, a light machine gunner (automatic rifleman), a grenadier, and a rifleman.

13. ATP 3-21.8, *Infantry Platoon and Squad*, 1-13. The weapons squad is a specialized squad divided into two M240 machine-gun teams and two close combat missile teams armed with Javelin missiles.

14. *Priročnik za Poveljnike Oddelkov* [Squad Leader Manual] 811-11-1/97, *Taktika* [Tactics] (Slovenia: Ministry of Defense, 14 December 1998). The current Slovenian Armed Forces (SAF) infantry squad Table of Organization and Equipment is a copy of the U.S. Army infantry squad, but the old SAF squad's organizational structure is still doctrinally valid. According to the SAF Squad Leader Manual, an infantry rifle squad should doctrinally be composed of squad leader, a designated marksman, a light machine-gunner and assistant, a grenadier, an antiarmor specialist and assistant, and four riflemen; in total, eleven soldiers that are not organically subdivided into teams.

15. *Ibid.*, chapter IV.

16. Gordon IV et al., *Comparing U.S. Army Systems with Foreign Counterparts*. The 300 meter (m) team is composed of a team leader and two riflemen, usually augmented with antitank rockets. The 600 m team is composed of a team leader, a 51 mm assault mortar man, a light machine-gunner, and optionally a sniper/marksman.

17. *Ibid.*; "French army organization," Armaholic, accessed 2 March 2018, <http://www.armaholic.com/forums.php?m=posts&q=10420>.

18. For the purpose of this article, the term Eastern armies relates roughly to those of China, Vietnam, North Korea, and some Middle Eastern insurgency/terrorist organizations (e.g., Hezbollah).

19. H. John Poole, *Phantom Soldier: The Enemy's Answer to U.S. Firepower* (Emerald Isle, NC: Posterity Press, 2001).

20. H. John Poole, *Tactics of the Crescent Moon: Militant Muslim Combat Methods* (Emerald Isle, NC: Posterity Press, 2004), 25.

21. Norfolk, "The Rifle Squad/Section-What Should It Do and How Should It Be Organized?," SinoDefenceForum (website), 12 August 2007, accessed 9 February 2018, <https://www.sinodefenceforum.com/the-rifle-squad-section-what-should-it-do-and-how-should-it-be-organized.t3379/>. The leader of this online professional discussion indicates that a People's Liberation Army squad comprises a four-man fire team (including the squad leader and an antitank weapon), a three-man fire team with an antitank weapon, and a three-man fire team with a light machine gun.

22. Poole, *Tactics of the Crescent Moon*.

23. Poole, *Phantom Soldier*, 33–46.

24. Melody, "The Infantry Rifle Squad." The studies included the 1946 U.S. Army Infantry Conference, the 1956 Research Study of Infantry Rifle Squad, the 1961 Optimal Composition of the Rifle Squad and Platoon, and the 1966 Infantry Rifle Unit Study.

25. *Ibid.* This was later on ignored by the U.S. Army, but one has to note that the 1946 Infantry Conference was the result of the collective U.S. experience from the Second World War.

26. Timothy M. Karcher, "Enhancing Combat Effectiveness, the Evolution of the United States Army Infantry Rifle Squad since the End of World War II" (master's thesis, Command and General Staff College, Fort Leavenworth, KS, 2002), 85, accessed 12 February 2018, <http://www.dtic.mil/get-tr-doc/pdf?Location=U2&doc=GetTRDoc.pdf&AD=ADA407058>.

27. Sattler and O'Leary, "Organizing Modern Infantry," 40.

28. *Ibid.*, 32.

29. Melody, "The Infantry Rifle Squad." Squad attrition rates in high intensity combat are on average between 20 and 30 percent, but we have to consider that the squad size at any given time is also affected by illness, leave, courses, etc.

30. *Ibid.*

31. Michael O'Leary, "The Canadian Infantry Section Attack Part One: Attrition Training in a Manoeuvre Army," The Regimental Rogue website, 1999, accessed 12 February 2018, http://regimentalrogue.com/papers/sect_atk.htm. Squad members routinely carry extra belts of machine-gun ammo, mortar rounds, and light antiarmor rockets.

32. Karcher, "Enhancing Combat Effectiveness," 9–10. "The issue of standardization across the infantry force (heavy and light units) finally caused planners to settle on a nine-man infantry rifle squad, while keeping the fire team organization ... Thus, over the last twenty-five years, one witnesses a decline in the capability of squad-level fire and maneuver due primarily to personnel constraints."

33. Melody, "The Infantry Rifle Squad," 1. Heavier loads are making the soldier less mobile and make it harder to react to surprise events.

34. Karcher, "Enhancing Combat Effectiveness." As pointed out by Karcher, "the concept of the BFV [Bradley fighting vehicle] providing the base of fire to allow the mechanized infantry 'squad' to maneuver is flawed, and yields a rifle squad incapable of conducting fire and maneuver"; see also Melody, "The Infantry Rifle Squad," 41. "Bradley dismounted element of six is too small and too heavily armed."

35. Not necessarily a simple, short, or cheap proposition.

36. Sattler and O'Leary, "Organizing Modern Infantry," 35. To put it in another way, there is no point in situational awareness that tells a

soldier or his commander what is going on in an adjacent sector and an insight into the bigger picture if he is not able to process and react to the enemy coming up from the sewer behind him.

37. Online and Social Media Division, *The United States Army Social Media Handbook* (Washington, DC: Office of the Chief of Public Affairs, April 2016, obsolete). Among other things, the *Army Social Media Handbook* discusses how social media enables the U.S. Army family around the world to stay connected and tell the U.S. Army's story. The key phrase for our purpose is "staying connected." Social media effect on the battlefield relates to the feeling of connectedness in the absence of physical contact. Through social media usage on the battlefield, the Army can—to some extent—mitigate the negative impact of the absence of physical contact caused by greater dispersion of units and individuals.

38. Ronan Doaré et al., *Robots on the Battlefield: Contemporary Issues and Implications for the Future* (Fort Leavenworth, KS: Combat Studies Institute Press, 2014).

39. Poole, *Phantom Soldier*, 223–27.

40. O'Leary, "The Canadian Infantry Section Attack Part One." The author quotes Col. Arjun Ray: "Fetishism for battle drills has been largely responsible for sanitizing imagination, creativity, and mental mobility in infantry ranks. Battle drills are ... a set of reactions ... Conversely; tactics are a thought out plan to overcome the threat. The two are therefore dissimilar."

41. The objective may be a section of an enemy trench, a family home, a bunker, or similar-size target; Army Doctrine Reference Publication (ADRP) 3-0, *Operations* (Washington, DC: U.S. GPO, October 2017), GL-2. *Close combat* is defined as "that part of warfare carried out on land in a direct-fire fight, supported by direct and indirect fires and other assets"; Joint Publication 3-0, *Joint Operations* (Washington, DC: U.S. GPO, January 2017), GL-12. *Maneuver* is defined as "employment of forces in the operational area through movement in combination with fires to achieve a position of advantage in respect to the enemy."

42. Sattler and O'Leary, "Organizing Modern Infantry," 41.

43. Two soldiers are much better able to treat and evacuate a wounded soldier than one "buddy" soldier. And, if a soldier is killed, a replacement's integration into a cell is easier than building a new buddy team.

44. Symbols used in the figure are from ADRP 1-02, *Terms and Military Symbols* (Washington, DC: U.S. GPO, November 2016), table 5-1.

45. A predetermined organizational solution tends to dictate tactical options; therefore, a flexible organization at squad level is preferred. Two balanced fire teams also mean two light machine guns and two grenade launchers, which studies have shown are not the most desirable weapon systems in close combat (e.g., urban, trench clearing, and bunker assault).

46. The basic infantry unit would be able to sustain 33 percent casualties (four men) before being unable to fire and maneuver, as opposed to 11 percent casualties (one man) of the current U.S. Army and SAF infantry squad.

47. A combat load is not just ammunition and explosives, but also water, rations, and life-support items, as well as other enablers such as unmanned aerial vehicles, biometric devices, batteries, observation devices, nonlethal weapons, ladders, breaching devices, etc.

48. ATP 3.21-8, *Infantry Platoon and Squad*, 1-13.

49. As advancements in communications technology are making radios smaller, lighter, and more user-friendly, there is no longer a need for a designated radio operator at the platoon or basic infantry unit level.