

# The US Army War College Quarterly: Parameters

---

Volume 26  
Number 2 *Parameters Summer 1996*

Article 3

---

6-1-1996

## Take No Casualties

Karl W. Eikenberry

Follow this and additional works at: <https://press.armywarcollege.edu/parameters>

---

### Recommended Citation

Karl W. Eikenberry, "Take No Casualties," *Parameters* 26, no. 2 (1996), doi:10.55540/0031-1723.1773.

This Article is brought to you for free and open access by USAWC Press. It has been accepted for inclusion in The US Army War College Quarterly: Parameters by an authorized editor of USAWC Press.

# Take No Casualties

KARL W. EIKENBERRY

---

From *Parameters*, Summer 1996, pp. 109-118.

---

Throughout the history of armed conflict, government and military leaders have had to reckon with the effects of casualties on strategy and warfighting. The logic behind King Pyrrhus's famous reply to those offering him congratulations after gaining a costly victory: "If we win one more such victory over the Romans, we shall be ruined," remains relevant in our times.[1]

Statesmen and generals consider battle losses from different perspectives. The former must weigh the repercussions of excessive casualties on the level of civilian morale necessary to successfully prosecute a war, and ultimately (at least in a representative form of government) on their own political futures. The latter, on the other hand, must balance potential losses against a wide variety of military factors including probable strategic or tactical gains, possible damage to the effectiveness of the forces employed and their ability to cope with enemy countermoves, and the difficulty of reinforcing or reconstituting the force. Military commanders, when planning and conducting operations, must also respond to their civilian leaders' guidance (if any) concerning the number of casualties deemed politically acceptable.

While battle losses, then, are unquestionably a matter of vital concern both to heads of state and to those who command their armed forces, it is not at all clear to what extent it is constructive for a military to explicitly include the goal of casualty limitation as a cornerstone of its doctrine. I will argue that, at least from an American perspective, there may be subtle, but nevertheless real, long-term risks in doing so. Before such speculation, however, it is useful to first discuss why all states and their militaries seek to reduce casualties, and then to elaborate on the reasons why US political and military leaders have been particularly and increasingly averse to high numbers of fatalities in combat actions. It is only by understanding the nature of this undercurrent, which seems to be leading America irresistibly to place ever higher premiums on the avoidance of any deaths in combat, that we can reflect on the possible consequences in an informed manner.

## Why States and Their Armed Forces Seek to Minimize Casualties

Political leaders who consider committing their nations to war, or sustaining their country's ongoing participation in an armed conflict, must consider how many lives they are willing to see expended in order to accomplish the objective.[2] They must concern themselves both with the public's attitude to personnel losses, and to the expected reaction of the political opposition. While there are numerous variables influencing these attitudes and reactions (for instance, the openness of the political system, the role of the media, and the economic costs of a war), a central factor in all cases is the degree to which involvement in a conflict is regarded as a legitimate defense of a nation's vital interests. The two global wars of this century were characterized by the efforts of most parties to subjugate and destroy their opponents, leading to conditions enabling heads of state to weather unprecedented levels of casualties. Such carnage and human sacrifice stand in sharp contrast with the results of the countless limited wars since World War II in which the stakes (at least for the major powers when they have involved themselves) were not as high. Clausewitz anticipated as much when he wrote:

On the other hand, the less intense the motives [for war], the less will the military element's natural tendency to violence coincide with political directives. As a result, war will be driven further from its natural course, the political object will be more and more at variance with the aim of ideal war, and the conflict will seem increasingly *political* in character.[3]

It is patently impossible for a statesman to openly discuss in quantifiable terms what he deems a tolerable level of casualties--an announcement such as "I believe this conflict to be worth the expenditure of 50 casualties" would hardly

inspire a people or an army, but it might inspire an enemy to inflict 51 casualties. Yet the need to balance losses and gains is an element in any political leader's strategic calculations, and his conclusions will almost always be communicated implicitly, or even explicitly, to his military commanders.

The leaders of a nation's armed forces must at some point in their development of military strategy look upon manpower as a finite resource. Measure must be taken of the size and quality of the standing force, the reserves, and the potential replacement pool. Furthermore, the probability of mobilization being directed by civilian leaders (historically, an often difficult political decision) must be considered. Commonly, a state that finds itself severely disadvantaged in terms of manpower against a likely threat will attempt to develop a doctrine that offsets such a handicap. Germany, for instance, believing itself outnumbered and surrounded by potential enemies prior to World Wars I and II, adopted preemptive offensive strategies. Similarly, Israel, convinced it would quickly lose a war of attrition against an Arab coalition, has relied on a blitzkrieg doctrine that aims at delivering rapid knockout punches.

The past, of course, greatly influences and shapes military doctrine. Organizational inertia, and a proclivity for preparing to fight the last war, make any efforts by armed forces to adjust to "new paradigms" difficult at best. Armies (referring to all services) that have experienced huge losses, or somehow have been traumatized by casualties in a recent war, will likely sum up their experiences and work to avoid repeating them. The French General Staff after World War I determined it must avoid the slaughter that had resulted from the revolution in firepower in the early 1900s, and thus embraced a defensive mentality which took form in the Maginot Line.[4] The German High Command, on the other hand, drew very different lessons from its own ordeals during the First World War. Yet the effect of casualties on a military's psyche will not depend merely on the absolute losses suffered, but instead on how those losses were perceived by the body politic, which is, in turn, a function of the level of popular support for the war. More on this later, when we turn to the American experience.

Casualty reduction has yet another meaning in the operational and tactical context. A commander may elect to emphasize the conservation of his manpower for many different reasons. The uncertain nature of war, and the fog that surrounds it, lead to indecisiveness as leaders suspend activity while they hope for the arrival of more precise information.[5] Commanders are loathe to commit forces and risk their destruction when there is not a high probability of success. Furthermore, an army may avoid decisive engagement as part of an overall strategy designed to exhaust an enemy (Fabius versus Hannibal), or to bide time while building up one's strength (the Allies against the Axis in the early years of World War II).

Finally, commanders are reluctant to chance the annihilation of a unit they have trained and for which they are responsible. Compassion, the burden of responsibility for ordering men to their possible deaths, and the feeling of abhorrence at presiding over the disintegration of one's forces, all militate against boldly sending soldiers into harm's way. Attitudes also differ within militaries, reaching down to the lowest levels of command, and over time and conflicts, regarding the acceptability of casualties. These find their origins in the opinions of the public and political leaders, and may be manifested in terms of how commanders and their staffs develop and analyze particular courses of action. To the extent a war is waged, as it usually is, in a "half-hearted manner" (Clausewitz's "wars of limited aims"),[6] officers and soldiers will be less inclined to find inspiration in Frederick's maxim that "war is decided only by battles, and is not finished except by them." [7] If commanders learn through experience that force preservation is valued more by the organization than is boldness, with its attendant dangers, an entire army's approach to war will reflect as much.

## **The American Experience**

American society is open and pluralistic, and has historically been served by an independent, skeptical press. Accordingly, US political leaders have been particularly sensitive to the relationship between the cost of war and public support. Even during the United States' first experience with unlimited war, President Lincoln remained concerned in the run-up to the 1864 election that the continuing huge losses of Union troops, in the absence of any clear gains on the battlefield, might lead a weary electorate to abandon him and the cause.[8] Certainly, the relatively smaller sacrifice asked of the people of the North, with a much larger population base and higher standard of living than enjoyed by the Confederacy, helped them to persevere against an enemy that was initially strongly committed to gaining independence.[9]

It isn't, however, until after the Second World War that America's statesmen found themselves almost without respite facing the difficult task of objectifying the value of a foreign policy goal in terms of potential losses. There are several reasons for the emergence of this phenomenon. First, the United States was the leader of the Free World and the only power capable of countering the Soviets. International responsibilities rapidly multiplied, and America increasingly found itself engaged militarily around the globe. Second, potential battlefields were often remote and isolated. In the absence of the loss of the fleet at Pearl Harbor, or the sinking of US merchant vessels in the Atlantic, politicians found it exacting to muster and sustain public backing for campaigns abroad. Third, the advent of the nuclear era reduced the utility of total war. Limited war begets limited objectives, which beget more urgent political concerns over casualties. Fourth, the conscription of the armed forces, reinstated just prior to America's entry into World War II, was continued until the end of the Vietnam War. Up to a point, a democratic people and their representatives are probably more solicitous about the fate of a draft than a volunteer army. Fifth, and last, America's unrivaled technological prowess offered its leaders at least the hope of achieving victory through science, innovation, and wonder weapons. In the language of an economist, America had a comparative advantage in capital, and was at a comparative disadvantage in labor. With equipment and technology relatively cheap and manpower dear, both economically and politically, it followed that personnel losses would come to be considered as increasingly expensive.

America's political leaders variously captured and lost the prize because of their policies during the Korean and Vietnam wars. As casualties mounted in both contests, the electorate increasingly asked what vital interests were at stake to justify the human and economic sacrifice. Both wars led to the defeat of incumbent political parties. The lesson learned for all was that it was politically risky, if not suicidal, to preside over any limited conflict that could not be won quickly, with relatively few casualties. The successes of our military in combat actions in the 1980s and 1990s were no doubt a reaction to Korea and Vietnam, as civilian leaders resolved to use armed force only when we could achieve victory with little loss of life. Yet the extraordinary results (see table below) may have created strong, and quite possibly unrealistic, expectations among the general public and civilian leaders that armed conflict, properly managed, can usually be waged with little loss of life.

US Personnel Killed in Action[10]

<b>Conflict</b>	<b>Total KIA</b>
World War II	291,557
Korea	33,651
Vietnam	47,364
Grenada	16
Panama	24
Persian Gulf	293

By the 1990s, acutely aware of domestic political constraints and seeking to capitalize on America's overwhelming advantages in military technology, firepower, and strategic mobility, the Bush Administration articulated a defense strategy for regional conflicts that posited the following:

In regional conflicts, [America's] stake may seem less apparent [to the people]. We should provide forces with capabilities that minimize the need to trade American lives with tyrants and aggressors who do not care about their own people. Thus, our response to regional crises must be decisive, requiring the high-quality personnel and technological edge to win quickly and with minimum casualties.[11]

The apparent advent of an era of peace operations has posed vexing new problems for government leaders. Such missions do not allow for the use of overwhelming force to attain quick, decisive victories. For a people whose standard for judging the wisdom of military intervention is based upon the results of Urgent Fury, Just Cause, and Desert Storm, peacekeeping operations are viewed with considerable skepticism. To a significant degree, current debates in Washington over foreign involvements--in Bosnia, for example--make central the question, "How many lives is it worth?" This seems to be a continuation of a trend that reaches back to the start of the Cold War.

Understandably, the American military has been influenced by this trend and responded accordingly. During the wars in Korea and Vietnam, commanders were constrained by political realities that precluded the prosecution of total war. Moreover, these wars were unlike World War II, when the armed forces had an unlimited supply of manpower to draw upon--at least up to the point the industrial base remained unimpaired, a threshold reached in 1944. Instead, military planners knew they could not hope for anything beyond a very circumscribed mobilization. This, at a time when the

primary threat remained the Soviet Union, war with whom would immediately transform the ongoing conflicts into mere sideshows. The luxury of drawing upon formations in Germany, key to the Desert Storm campaign, did not avail itself to American military strategists while the Warsaw Pact remained a credible foe. Hence, pressure emanated from the White House and the Pentagon, down to the lowest levels of command, to minimize combat losses, or at least to ensure that those friendly casualties suffered could always be justified in terms of commensurately greater injury suffered by the enemy. And as political-military stalemate came to define both conflicts, such justification became more and more difficult. A heavy reliance on air power, precision firepower, and mobility, and increasingly stringent standards for acceptable friendly-to-enemy casualty ratios, came to distinguish the American way of war.

After the withdrawal from Vietnam, the US armed forces were restructured and reoriented. Conscription was ended and the military became an all-volunteer organization. A highly professional standing army, trained to fight across a wide spectrum of potential conventional conflicts, would henceforth be America's deterrent and weapon of choice. At the same time, surprised by the results of the 1973 Arab-Israeli War, the US military began to develop a doctrine of fighting outnumbered and winning. The unprecedented losses that had been so quickly suffered by the Middle East adversaries led American military leaders to focus on "winning the first battle of the next war." Advanced equipment and innovative doctrine would offset Soviet numerical superiority. Budget constraints contributed to the process. As Paul Herbert noted in his excellent study of the development of American military doctrine in the 1970s:

The rising costs associated with the volunteer Army [and] the drastically increased cost of fuel . . . combined to make the Army of the early 1970s cost conscious to a fault. . . . The Army's need to preserve its investment in new weapons in an era of strict fiscal controls thus prompted the search for an overarching concept, or doctrine, and insured that the doctrine would have a strong weapons emphasis. A doctrine that maximized the potential of every weapon on the battlefield also appeared to maximize the return on every dollar spent on those weapons.[12]

As the US military recovered from the depths of the mid-1970s, it was able to develop a more offensively oriented way of war, AirLand Battle doctrine, outlined in the 1986 version of the Army's "warfighting bible," FM 100-5, *Operations*. Many of the doctrine's so-called tenets and imperatives, such as "conserve strength for decisive action," "use terrain, weather, deception and operational security," and "move fast, strike hard, and finish rapidly," logically followed from the perceived need to avoid protracted wars and battles of attrition.[13] Sensitivity to friendly losses was also reflected in training doctrine. For instance, in the Army publication *Mission Training Plan for the Infantry Battalion*, performance standards were set for various tactical operations conducted in controlled training environments. These standards include the maximum number of allowable friendly casualties for particular missions--for example: "defend," 30 percent; "withdraw under enemy pressure," 30 percent; and so on. Those standards, incidentally, would have prompted harsh critiques of Colonel Joshua Chamberlain at Gettysburg and Field Marshal Erwin Rommel as a division commander in France. Moreover, the problem of fratricide--friendly casualties incurred through the misapplication of one's own firepower--has been common throughout the history of warfare. When it was made more accessible to study by the sophistication of the Army's Combat Training Centers, it was placed in the limelight, and volumes of literature followed. As an example, the *Mission Training Plan* cited above stipulates the standard "the battalion sustains no casualties from friendly fire" for all combat operations. That standard leads to the peculiar case wherein an infantry battalion, being evaluated on its ability to defend, could totally annihilate a huge attacking force, suffer no casualties except one fratricide, and still be assessed as having failed to perform up to standard.

War with the Soviet Union did not come to pass. But AirLand Battle doctrine was specifically designed to serve the military in mid- and low-intensity conflicts as well. The sledgehammer approach that proved so effective in Grenada was refined in Panama and the Persian Gulf, leading to a vindication in the eyes of most of the doctrine of "overwhelming force," and the conclusion that the choices in future conflicts would be clear-cut: either repeat the Vietnam experience, or go directly and ruthlessly for the jugular. The 1993 version of FM 100-5 reflects as much, stating that the Army "produces forces of the highest quality, able to deploy rapidly to fight, to sustain themselves, and to win quickly with minimum casualties. That is decisive victory." Moreover, it notes, "the American people expect decisive victories and abhor unnecessary casualties." [14] The question remains, what are the consequences, if any, of allowing such expectations and abhorrence to help shape military doctrine?

## Casualty Limitation and Doctrine

The larger political issues involved in attempting to find a balance between casualties and policy objectives are beyond the scope of this article. The problem is an intractable one and will always be particularly acute in liberal democracies. However, it should be pointed out that one of the most difficult dilemmas facing our statesmen today is how to respond effectively to domestic concerns about losses in conflicts abroad, while still showing the tangible signs of commitment necessary to maintain a claim to coalition and world leadership. With increasing US participation in multinational military operations likely in the years ahead, the subject will probably become more contentious. The sometimes sharp disagreements among the United States and its NATO allies over the proper military course of action in Bosnia, and more specifically, over the willingness to put soldiers at risk, may foretell a growing interdependence between domestic and international "burden-sharing" debates.

In the military realm, we may speculate on the effects of explicitly embedding the goal of casualty limitation in doctrine by looking at three areas: research and development (R&D) and force structuring; doctrinal content; and leadership and morale. Each is addressed in turn.

*R&D and Force Structuring.* Might an overemphasis on casualty limitation have adverse consequences in the areas of R&D and force structuring? One can make a strong argument that it could. The history of warfare provides overwhelming evidence that high-tech "smart" weapons are but one dimension of combat power. For instance, Serbian militia can counter the most sophisticated gadgetry the United States can throw against them simply by positioning their mortars next to mosques. The American military must always plan for tough foes like the North Vietnamese, resilient against the most modern arsenal available, and count the incompetent armies of Noriega and Saddam Hussein as windfalls. War is still a complex political act, not a computer simulation, and combat is still an art, not a science. Hills remain to be taken by soldiers fighting their way up to the summit. Too enamored of the technical solution, the United States may produce the wrong mix of equipment and structure its forces inappropriately. The Great Wall, throughout the eons, appeared to the barbarians more a manifestation of the Chinese Empire's unwillingness to raise armies to guard the frontiers than it ever served as a credible "high-tech" deterrent or defensive barrier. There is perhaps an analogy to be drawn.

*Doctrinal Content.* Can the doctrinal elevation of casualty limitation to an operational goal have any ill effects on an army's ability to wage war? If we assume that America's future wars will all have the characteristics of the campaigns of the past 12 years, the response is probably no. Certainly, if the US military has the time to bring overwhelming force to bear on a second- or third-rate power, Americans can, and should, expect few casualties. It is doubtful, however, that the United States can hope for such good fortune indefinitely. There will arise, probably in the not-so-distant future, a threat to a vital interest, whose defense cannot be assured by a 100-hour campaign. A military that on its own volition discards courses of action because they are too costly may lose its spirit of creativity and innovation. The Germans suffered over 150,000 casualties in their lightning attack against France in 1940.<sup>[15]</sup> During the course of planning the operation, had their General Staff immediately discarded any options somehow deemed too painful to consider, they might still today be marshaling their forces.

There will always be ways to improve upon any plan of attack if casualty reduction is a key consideration (more firepower, more time to muster forces, less ambitious objectives). But at what point does the desire for overwhelming force imply overwhelming conservatism? Can there be times when a swift counterstroke could result in higher casualties, but would save the treasury billions of dollars, and actually serve as a more effective deterrent in the long run by demonstrating to the world that the nation is willing to commit forces at less than preferred force ratios? Otherwise, does war become such a high-priced venture as to make it an impractical instrument of foreign policy? And finally, might not a doctrine that seeks to preserve, before it seeks to destroy, inevitably run the risk of giving rise to Maginot Lines? These are questions that offer no easy answers; nevertheless, they can be summarily dismissed only by one not interested in developing strategy in a comprehensive way.

*Leadership and Morale.* Can an overt stress on casualty limitation cause an army's leaders to become too timid, and the soldiers to lose their "warrior spirit"? The ancient Chinese strategist and commander Wu Zi wrote, "In general, on the battlefield, if soldiers are committed to fight to the death they will live, whereas if they seek to stay alive, they will die. . . . Thus it can be said that the greatest harm that can befall the army's employment [stems from] hesitation, while the

disasters that strike . . . are born in doubt." [16] Variations of this theme have been discussed by military theorists of all cultures throughout the history of warfare. Would Leonidas have stayed the course with his band of Spartans at Thermopylae had his army's doctrine been grounded deeply in the art of casualty avoidance? The famous military historian Hans Delbrück described the significance of the Spartan defense as such:

Of itself, the defense of Thermopylae was as good as hopeless. [And] as a matter of form, it could also be said that it was a mistake from the physical-military point of view, but it was of morale significance and of inestimable value in its fulfillment, in that the entrance into Greece proper was not to be handed to the barbarians without a fight. [17]

Acts of valor and audaciousness do play an unquantifiable role in battle that can have profound effects on collective morale, resolve, and aggressiveness. To make too much of a virtue of "living to fight another day" might discourage bold acts. If casualty limitation is simply implied in an order, a subordinate commander may still elect to accept considerable losses if he deems it necessary to fulfill his mission; however, if battle losses are explicitly frowned upon at every level, the men and the mission may become blurred. Furthermore, if the dominant culture becomes one in which each and every casualty is researched in great detail to ascertain causes, and not infrequently to assign blame, the forces may be ill-prepared for the inevitable tough fight lurking over the horizon. Considered coldly, soldiers and an army are ultimately a means, not an end. This truth should not be obscured.

## Conclusion

The successful waging of war in both the political and purely military dimensions requires hard, realistic calculations of costs and benefits. Serving the people of a vibrant democratic state, US political leaders have traditionally, and rightfully, placed much significance on the loss of lives suffered in America's battles. Moreover, the United States is a scientifically advanced nation that is best served by developing a doctrine that takes advantage of its technological sophistication and conserves manpower. Obviously, the United States would have little influence in today's chaotic world if it were to quickly exhaust our forces in contests of attrition in far-flung regions of the globe. Fighting smartly, in the sense of using the most modern weapons and innovative doctrine, has been the American military's forte in the 20th century, and it will be even more important to the success of our armed forces given the domestic constraints and international challenges in the coming years.

I have not argued in this article that America should beat its precision-guided weapons into bugles and bayonets. Rather, my purpose is to suggest--modestly and speculatively--that casualty limitation, an issue that must often be addressed explicitly by statesmen, is best left unmentioned by the military in its doctrine, and instead considered seriously, but implicitly, as it plans for war.

---

## NOTES

1. Justin Wintle, ed., *The Dictionary of War Quotations* (New York: The Free Press, 1989), p. 163.
2. John Mueller, "Political Pressures and Opportunities," Conference on the Policy Implications of Non-Lethal warfare Technologies, Lexington, Mass., 2 June 1993. The subsequent discussion of political leaders' concerns about casualties draws in large part from Dr. Mueller's presentation.
3. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton Univ. Press, 1976), pp. 87-88.
4. Barry R. Posen, *The Sources of Military Doctrine* (Ithaca, N.Y.: Cornell Univ. Press, 1984), pp. 106-09, 116-20. The reasons France adopted a defensive strategy are far more complex than being simply a response to the horrific casualties of World War I, as Posen makes clear in his superb work. Nevertheless, World War I losses were a most critical part of the calculus used by the French military when conceptualizing their approach to the next war.
5. Clausewitz, p. 217.

6. Ibid., p. 613.

7. Frederick the Great, *The Instructions of Frederick the Great for His Generals*, trans. T. R. Phillips, in *Roots of Strategy* (Harrisburg, Pa.: Stackpole Books, 1985), p. 391.

8. Peter J. Parish, *The American Civil War* (New York: Holmes and Meier, 1981), pp. 463-69; and Margaret Leech, *Reveille in Washington 1860-1865* (New York: Harper and Brothers, 1941), p. 346.

9. Archer Jones, *Civil War Command and Strategy* (New York: The Free Press, 1992), pp. 238-39.

10. Figures from Reference Section inquiry, US Army War College Library, Carlisle Barracks, Pa., 27 September 1993.

11. Dick Cheney, *Defense Strategy for the 1990s: The Regional Defense Strategy* (Washington: GPO, January 1993), p. 15.

12. Paul H. Herbert, *Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations* (Washington: GPO, 1988), p. 100.

13. FM 100-5, *Operations* (Washington: GPO, 1986), pp. 14-26.

14. FM 100-5, *Operations* (Washington: GPO, 1993), ch. 1.

15. Alistair Horne, *To Lose a Battle: France 1940* (New York: Penguin Books, 1987), p. 649.

16. Wu Zi, *Wu-tzu*, trans. Ralph D. Sawyer, in *The Seven Military Classics of China* (Boulder, Colo.: Westview Press, 1993), p. 215.

17. Hans Delbrück, *History of the Art of War, Volume 1: Warfare in Antiquity*, trans. Walter J. Renfro, Jr. (Lincoln: Univ. of Nebraska Press, 1990), p. 95.

---

Colonel Karl W. Eikenberry is assigned to the staff of the Assistant Secretary of Defense for International Security Affairs, Office of the Secretary of Defense. He commanded a light infantry battalion in the 10th Mountain Division and served as an assistant attaché in the American Embassy in the People's Republic of China and as a division chief with the Strategy, Plans, and Policy Directorate of the Army Staff. Colonel Eikenberry is a graduate of the US Military Academy, holds a master's degree from Harvard University in East Asian studies, has studied at the British Ministry of Defence Chinese Language School in Hong Kong and at Nanjing University in the PRC. He also was a national security fellow at the JFK School of Government, Harvard University, and he is a Ph.D. candidate at Stanford University. The present article is adapted from an earlier version which appeared in *Army*, February 1994, under the title "Casualty Limitation and Military Doctrine," © 1994 The Association of the United States Army; material from that article is reprinted by permission.

---

Reviewed 28 May 1996. Please send comments or corrections to [carl\\_Parameters@conus.army.mil](mailto:carl_Parameters@conus.army.mil).