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DOI:

[10.1080/01402390.2015.1125338](https://doi.org/10.1080/01402390.2015.1125338)

Document Version

Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Stone, J. (2016). A Proxemic Account of Bayonet Fighting. *Journal of Strategic Studies*, 39(7), 1-21.
<https://doi.org/10.1080/01402390.2015.1125338>

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A PROXEMIC ACCOUNT OF BAYONET FIGHTING

This is the accepted manuscript

Version of Record is at: 10.1080/01402390.2015.1125338

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INTRODUCTION

Scholarly interest in the bayonet has been very limited to date, and this is hardly surprising. When set within the context of the rapid and sustained development of weaponry, which has been such a conspicuous feature of warfare since the mid-nineteenth century, the humble bayonet pales almost into insignificance; its influence over the character of battle appears barely worth noting. When it does attract attention it tends to be as a curiosity, an anachronism whose continued presence requires explanation. Moreover, most such explanations view the bayonet's longevity as symptomatic of a military mind-set characterized by a dysfunctional conservatism of psychological or ideological origin.¹ Typical in this regard is the attitude of George Orwell, who ascribed the British Army's continuing attachment to the bayonet—"a weapon entirely useless except for opening tins"—to the stupidity of its aristocratic officers.² In what follows I advance a more positive explanation for the persistent presence of the bayonet on modern battlefields, by exposing the continuing value of its role in infantry combat. I do this with reference to a paradoxical feature of bayonet fighting that has never been adequately explained. My purpose is not to claim an essential role for the bayonet in modern warfare, but to demonstrate that it remains functional—even if this function can also be achieved in other ways.

THE PARADOX OF BAYONET FIGHTING

Ever since bayonets first appeared on the end of muskets, soldiers have proved reluctant to close within stabbing distance of their adversaries. This is despite the fact that mass bayonet charges were routinely practised down to the twentieth century, and that smaller episodes are not unknown even today. Time and again we find evidence of a discernible

1. For a review of the literature see John Stone, "The Point of the Bayonet", *Technology and Culture* 53/4 (2012) 891-3.

2. George Orwell, *Essays* (London: Penguin 2014) 152.

pattern of behaviour: bayonets are fixed and forward movement begins, only for things to “fizzle out” somehow along the way. Rarely do both sides get close enough to trade blows. Nevertheless, on those infrequent occasions when soldiers *do* come within striking distance of one another, the resulting fight is conducted with unusual ferocity. Hyper-aggressive behaviour is the norm under these circumstances, and combat ceases only when one side or the other have all become casualties. This, then, is the paradox of bayonet fighting: whilst soldiers appear reluctant to initiate close combat, they appear equally reluctant to stop fighting once they have begun. It is by explaining this paradox that we can understand how the bayonet can still have utility on the modern battlefield.

EXISTING EXPLANATIONS

Why is it that soldiers, who will routinely risk exposure to bullets and high explosives, seemingly balk at the prospect of close combat—only to fight so aggressively should they nevertheless meet at close range? To date nobody has provided a fully developed explanation of this phenomenon. A partial account can be found in the more general claim that most people are not naturally predisposed to kill one another, and that even soldiers will assiduously avoid doing so if given the opportunity. This is the position of Dave Grossman, a former US Army Ranger turned authority on the psychological dimension of killing in battle. At first glance his argument appears particularly relevant to present purposes because it establishes a relationship between reluctance to kill and the distance over which the act occurs. At long ranges, he maintains, reluctance is lower because soldiers do not witness the human consequences of their actions; they are not confronted with the effects of their weapons on the enemy. Conversely, at very short ranges reluctance to kill is high because the human consequences are immediately and uncomfortably apparent.³ If this range/reluctance relationship holds true, we might suppose that it plays some role in explaining why soldiers prefer to avoid the crisis of bayonet fighting if at all possible.

Grossman has amassed considerable evidence in support of his thesis, although for some commentators his arguments are discounted by the emphasis he places on the findings of another soldier turned scholar, S. L. A. Marshall. According to Marshall, only a minority of US soldiers during the Second World War (some 15 to 25 per cent) actively participated in battle by firing their weapons at the enemy.⁴ This rather startling finding has proved

3. Dave Grossman, *On Killing: The Psychological Cost of Learning to Kill in War and Society* (Boston: Little, Brown 1995).

4. S. L. A. Marshall, *Men Against Fire: The Problem of Battle Command in Future War* (New York: William Morrow & Company 1947).

controversial, in part because his surviving papers contain no statistical evidence to support it. The story is a complex one, but the significant point here is that Grossman's recourse to Marshall introduces a potential weakness into the former's position.⁵ Moreover, any such range/reluctance account cannot explain why soldiers may be unwilling to initiate close combat, and yet be equally unwilling to stop fighting should they begin. Whatever other merits Grossman's theory may possess, therefore, it seems we must look elsewhere to understand how avoidance behaviour is transmuted into uninhibited killing behaviour.

A PROXEMIC ACCOUNT OF CLOSE COMBAT

Some years ago, John Keegan became interested in just this question whilst studying the battle of Waterloo. His attention was drawn to the desperate character of the fighting at the fortified farmhouses of La Haye Sainte and Hougoumont, and he advanced a speculative explanation of what had taken place there. This explanation borrowed from the work of Swiss zoologist Heini Hediger (1908-92).⁶ Hediger is famous for establishing that animals display a standard repertoire of responses when confronted with an encroaching "enemy". No reaction occurs until the enemy infringes on a species-specific "flight" distance. At this point the threatened animal retreats in order to re-open the distance. Should the enemy nevertheless succeed in closing further, it will ultimately infringe on a "defence" distance. At this point the threatened animal's retreat is suddenly transmuted into an attack. Close proximity, in other words, elicits an aggressive response. Moreover, under circumstances in which a threatened animal perceives no avenue of escape, a "critical" response is initiated in the form of an explosion of hyper-aggressive behaviour. According to Hediger, therefore, flight, defence and critical responses are a function of the spatial relationships between animal and enemy, along with the availability of escape routes.

Keegan sensed here a parallel with the behaviour of soldiers as they close upon one another with bayonets fixed. Whereas an attack emanating from some distance away can secure the retreat of an enemy force, by dint of advancing within its soldiers' flight distance, an attack coming unexpectedly from close range can elicit high levels of aggression—especially if there is no line of retreat. Such circumstances, he suggested, elicit a critical

5. Robert Engen, "Killing for Their Country: A New Look at 'Killology'", *Canadian Military Journal* 9/2 (2008): 120-8; Robert Engen, "S. L. A. Marshall and the Ratio of Fire: History, Interpretation, and the Canadian Experience", *Canadian Military History* 20/4 (2011): 39-48.

6. H. Hediger, *Wild Animals in Captivity: An Outline of the Biology of Zoological Gardens*, trans. G. Sircom (London: Butterworths Scientific Publications 1950).

reaction in which the instinct is to strike out in order to kill. This, then, is why the fighting at the farmhouses was so fierce: it was conducted under conditions in which “[w]alls, passageways and corners bring men suddenly face to face with each other, restrict their room for manoeuvre and bar their line of retreat.”⁷

The idea that we are sensitive to infringements of our personal space will not be news to anyone. We all know from personal experience that crowded locations can lead to psychological discomfort and short tempers; we do not appreciate strangers “in our face”. Moreover, phenomena of just this kind were the subject matter of anthropologist Edward T. Hall’s famous work on “proxemics”, in which he analysed the dynamics of human interpersonal behaviour within the context of the physical spaces in which it occurs. Hall’s work, which itself draws partly on Hediger, led him to conclude that we are profoundly sensitive to the spatial aspects of our relationships with one another, but that we have become socialized into suppressing our equivalent of the flight reaction, thereby permitting us to become urbanized—to live closely alongside each other in large numbers. Crucially, however, suppression only works in the absence of fear. When fear is present the flight reaction re-asserts itself, “creating an explosive need for space.”⁸

Taken together, these various insights provide us with a tentative account of how human versions of the flight and critical reactions produce the behaviour associated with bayonet fights. Battlefields are frightening places, which means that the flight instinct is always present and will frequently be very difficult to overcome. Soldiers will therefore demonstrate a marked reluctance to close with the enemy if given any choice in the matter. Forward movement will likely either stall in the face of a resolute enemy, or precipitate his withdrawal before contact is made. Conversely, where battlefield conditions result in soldiers unexpectedly encountering one another at close range—and especially where retreat is difficult—the resulting critical reactions will manifest themselves as desperate struggles to the death. With this tentative explanation in mind, let us now examine the historical practice of bayonet fighting in more detail.

THE RARITY OF BAYONET FIGHTING

The rarity of bayonet fighting has long been an established fact. Credible eyewitnesses to battle have frequently observed that soldiers seldom trade blows at close quarters. During the nineteenth century, the experienced Swiss soldier, Baron Antoine de Jomini, was

7. John Keegan, *The Face of Battle* (London: Jonathan Cape 1976), 166-8.

8. Edward T. Hall, *The Hidden Dimension* (Garden City, NY: Doubleday 1966), 1, 175.

emphatic on this point: "I never saw such a thing on a regular field of battle."⁹ Ernst Jünger served in the German army throughout the First World War, during which he was wounded seven times and was highly decorated for bravery; and yet it was not until March 1918 that he witnessed a large-scale bout of hand-to-hand fighting.¹⁰ According to Fred Majdalany, a British veteran of the Second World War, there was a "lot of loose talk about the use of the bayonet. But relatively few soldiers could truthfully say they had stuck a bayonet into a German."¹¹ The last sizeable bayonet charge by US soldiers occurred in Korea in 1951 and was considered a highly unusual event at the time. Captain Lewis Millet led two platoons in an assault against superior Chinese forces that were dug in on a hillside, inflicting some 30 bayonet casualties in the process.¹² Since then smaller episodes have occurred on an infrequent basis. US troopers employed their bayonets against North Vietnamese soldiers during the battle of Ia Drang in 1965.¹³ In the Falklands War of 1982, Major John Kiszley led his soldiers in a night-time charge against Argentine positions, bayoneting one of the enemy in the process.¹⁴ During the second Battle of Fallujah in 2004 US marines sometimes used their bayonets to kill insurgents whilst clearing buildings.¹⁵ British soldiers also had recourse to the bayonet upon occasion in Afghanistan.¹⁶ The overall picture, however, is one of isolated episodes of bayonet combat that are deemed unusual when they occur.

It is also the case that bayonet wounds have rarely been encountered by those responsible for ministering to injured soldiers or disposing of the dead. In 1833 a British medical officer, who had spent four days after the battle of Waterloo treating the wounded,

9. Baron de Jomini, *The Art of War*, tr. G. H. Mendell and W. P. Craighill (Philadelphia, PA: J. B. Lippincott & Co. 1862), 302.

10. Ernst Jünger, *The Storm of Steel, From the Diary of a German Storm-Troop Officer on the Western Front*, tr. Basil Creighton (London: Chatto & Windus 1929), 257.

11. F. Majdalany, *The Monastery* (London: John Lane The Bodley Head 1945), 57.

12. For an interview with Millet see "Lewis Millett, Medal of Honor, Korean War", <https://www.youtube.com/watch?v=S9H7Xplk154> (accessed May 2015).

13. Harold G. Moore and Joseph L. Galloway, *We Were Soldiers Once ... and Young* (New York: Random House 1992), 122; Galloway cited by Pete Mecca, "The Unstoppable Journalist", *The Covington News*, <http://www.covnews.com/m/section/194/article/58895/> (accessed May 2015).

14. Max Hastings and Simon Jenkins, *The Battle for the Falklands* (London: Michael Joseph 1983), 303; *The London Gazette*, 8 October 1982, Supplement 49134, pp. 12846-7.

15. Richard S. Lowry, *New Dawn: The Battles for Fallujah* (New York: Savas Beatie 2010), 205, 215.

16. For example, Edwin Halpain and Justin Walker, "Bayonets in Basrah – A Case Study on the Effects of Irregular Warfare" (Shawnee, Okla.: Urban Warfare Analysis Center 2009).

wrote an anonymous letter to *The London Medical and Surgical Journal* that included the following passage:

Thousands of ... soldiers passed through my hands between the Sunday and the Thursday, (at which time we had cleared the ground, by burying the dead and forwarding the survivors to Brussels,) but amid all the horrible consequences of the firing and unerring application of weapons, I do not remember one instance of a *bayonet wound*. We had to deal with round shot, shells, musket balls, and sabres in every variety, but no trace of a bayonet made its appearance.¹⁷

As Keegan noted, some episodes of bayonet fighting did occur at Waterloo. As we shall see later, however, they took place under specific local circumstances that most soldiers would not have encountered on the wider battlefield. As such our unknown medical officer's testimony can be regarded as broadly reliable, rising as it does above the level of the narrowly impressionistic. More than 50,000 soldiers were killed or wounded at Waterloo. For someone to encounter no bayonet wounds, whilst treating casualties over four days, strongly suggests that bayonet fighting was indeed a rare event.

A similar finding was reported by Charles Johnson, who served as a hospital attendant during the American Civil War, and later recollected that he "never saw a wound from a bayonet thrust". This is unsurprising given that bayonet and sabre wounds accounted for just 922 (0.3 per cent) of 339,900 Union casualties during the war.¹⁸ Bayonet fighting during the First World War was also a rare event, judging from statistics associated with First US Army's operations in Europe. Of the 224,098 casualties requiring hospital treatment, a mere 235 soldiers (0.1 per cent) presented with bayonet wounds.¹⁹ For its part, the British official history of the war supplies two "snapshots" of admissions to casualty-clearing stations during two 24-hour periods of battle in 1917. The proportion of bayonet wounds was 17 out of 10,789 (0.2 per cent) and 8 out of 2,932 (0.5 per cent) respectively.²⁰ In all these cases, therefore, we are talking about a very small fraction of the total wounded.

17. Letter to *The London Medical and Surgical Journal*, Vol. 3, ed. Michael Ryan (London: Renshaw and Rush 1833), 500, with original emphasis.

18. Charles Beneulyn Johnson, *Muskets and Medicine, or Army Life in the Sixties* (Philadelphia, PA: F. A. Davis Company 1917), 250, 253.

19. Harry L. Gilchrist, *A Comparative Study of Casualties from Gas and Other Weapons* (Md.: Edgewood Arsenal 1928), 19, Chart No. VII.

20. W. G. Macpherson, *History of the Great War Based on Official Documents, Medical Services General History*, Vol. III: *Medical Services During Operations on the Western Front in 1916, 1917 and 1918; in Italy; and in Egypt and Palestine* (London: HMSO 1924), 170-1. Both samples contained a number of casualties (1,544 and 41 respectively) the cause of which was described as "uncertain".

By the Second World War, casualty surveys generally placed bayonet wounds under a “miscellaneous” heading that included all manner of infrequent hazards to life and limb.²¹ Exceptions exist, although these were based on restricted sample sizes. A survey of 2,335 US casualties sustained on Bougainville Island (1944), recorded only two bayonet wounds. A team investigating US casualties on New Georgia Island (1943) and in Burma (1944), noted that just three out of 393 had received bayonet wounds. Of these three, two were accidents with US bayonets whilst the third had also been shot.²² In this last case it may be that the soldier was bayoneted after receiving his other wounds, either to ensure he was already dead or to finish him off. No formal efforts to count bayonet wounds in more recent wars appear to have been made.

Historical practice therefore paints a clear picture: bayonet fighting has always been a rare event, and it would have been highly unusual to receive a bayonet wound in combat. Orwell is probably correct to assert that bayonets have been employed to stab many more tin cans than they have soldiers.

AVOIDANCE BEHAVIOUR

However, we also know that soldiers routinely fixed bayonets on the battlefields of the past, and that some still do so today. How, then, can we reconcile this with the observed scarcity of bayonet fighting and related casualties? In fact, connections between the scarcity of bayonet wounds and the behaviour of soldiers on early-nineteenth-century battlefields were explicitly drawn by the British surgeon George James Guthrie, who served as a medical officer throughout the Peninsular War. Years later he recalled that bayonet wounds had been comparatively rare; that although much had subsequently been written about bayonet fighting, little of it enjoyed any basis in fact.

That regiments do advance ... with the intent to charge with the bayonet, is indisputable; that other regiments do intend to meet them, or to receive the offered charge, is no less true. Nevertheless, they generally do neither one thing nor the other, but by some means, or accidental causes, of which I do not presume to give

21. For example, Frank A. Reister, *Battle Casualties and Medical Statistics: U.S. Army Experience in the Korean War* (Washington, D.C.: The Surgeon General, Department of the Army 1973), 38-51, which contains wound statistics by type of weapon for both the Second World War and the Korean War.

22. James C. Beyer, James K. Arima and Doris W. Johnson, “Enemy Ordnance Materiel” in James Boyd Coates and James C. Beyer, eds, *Medical Department, United States Army, Wound Ballistics* (Washington, D.C.: Office of the Surgeon General, United States Army 1962), p. 7; Ashley W. Oughterson et al., “Study on Wound Ballistics—Bougainville Campaign”, in Coates and Beyer, eds, 323.

any account, one party usually thinks discretion the better part of valour, and walks silently and angrily away. The unfortunate fellows who cannot get off fast enough, do occasionally suffer a little in the scuffle which takes place, and here and there small parties may engage in personal conflict; but, be the matter as it may, it rarely happens that many are hurt by the bayonet, or, if they are, they are killed outright, and do not come under the observation of the surgeon.²³

Guthrie's observations chime with those of the famous French authority on battlefield behaviour, Colonel Ardant du Picq (1821-70). Du Picq's principal interest lay in the role of moral forces in battle, which he believed remained central despite the rapidly increasing lethality of weapons during the mid-nineteenth century. One of his best-known findings was that soldiers rarely crossed bayonets with each other. As per Guthrie's account, bayonet charges were certainly made but they rarely led to close-quarters fighting. Rather, once two bodies of soldiers reached a certain distance, either the defenders retreated or the attackers halted before contact was made. Du Picq concluded that behaviour of this kind demonstrates that infantry combat is essentially a form of moral contest. To be sure, it occurs against the backdrop of a material contest for firepower superiority that influences how freely infantry can manoeuvre on the battlefield without suffering prohibitive losses. But what ultimately counts is the ability to threaten one's enemy with the prospect of annihilation by the imminent arrival of new formations of soldiers. This is what du Picq termed the "moral action of manoeuvres". Bayonet charges might provide a formalized occasion for the advance of such troops, but the bayonet itself was not materially implicated in the result. What mattered was that confidence amongst the attackers outweighed confidence amongst the defenders. By way of support for his argument, du Picq quoted from a letter written to him by an anonymous French officer who had fought at the Alma (1854) and at Castelfidardo (1860). On the subject of bayonet fighting, his correspondent had evidently observed the same dynamics at work and, like Guthrie, had made a link to the lack of bayonet casualties.

I have always noted that if a body which is charged does not hold firm, it breaks and takes flight, but that if it holds well, the charging body halts some paces away before it strikes... Also it is noted that in the hospital, practically all the wounds treated were from fire, rarely from the bayonet.²⁴

23. G. J. Guthrie, "Lectures in Some of the More Important Points in Surgery", *The Medical Times* 17 (1847-1848), 305.

24. Ardant du Picq, *Battle Studies Ancient and Modern*, 8th ed., trans. John N. Greely and Robert C. Cotton (New York: Macmillan 1921), 116, 123-4, 266.

Moving forward in time, a similar dynamic was evidently at play during fighting between British and German forces on heavily wooded Tunisian hills in 1943.

In our counter-attacks separate groups could not keep touch in this dense jungle-like country, so we used to form up in an extended line, with three or four paces between each man. Then at a signal from the centre the force would move forward, beating the thickets as it went. Our camouflaged clothing and helmets were peculiarly suited to this type of country and practically invisible over a few yards. Invariably the German infantry had had no time to dig in, and as the noise of shouting and beating approached they usually slunk away through the undergrowth in twos and threes, firing wildly.²⁵

The difference in this latter situation was that the Germans were apprised of the impending arrival of enemy soldiers not by the sight of their approach, but rather by the noise they deliberately made. This was an unorthodox tactic, but the British appear to have instinctively understood that “the noise of shouting and beating” would significantly affect their adversaries’ morale. As we shall see shortly, had the British not telegraphed their advance by such unorthodox means, the outcome of soldiers suddenly encountering each other at short range might well have been very different.

The same general pattern of events was repeated during Millet’s bayonet charge during the Korean War. The battle’s outcome was not determined by the 30 bayonet casualties inflicted, but by the great majority of Chinese fleeing in panic before the oncoming US troops. During Kiszley’s night attack in 1982 he shot two defenders at close range and bayoneted a third. Nevertheless it was the renewed advance of his soldiers that ultimately broke Argentine resistance. More latterly, instances of close combat in Fallujah also seem to have impelled desperate attempts to flee by insurgents confronted with the prospect of bayonet attack. As one veteran of the fighting put it, there “were AK and RPG armed insurgents bumping into each other, smacking into walls and door frames, and even jumping out of second story windows trying to get away from Marines coming at them with fixed ... bayonets.”²⁶

Finally, du Picq would certainly have recognized the moral forces at play during a bayonet charge conducted by British infantry in Afghanistan. In October 2011 a British patrol was caught by Taliban fighters in a carefully planned ambush. The patrol was quickly pinned down in a ditch whilst elements of the enemy manoeuvred in order to bring it under more

25. Peter Stainforth, *Wings of the Wind* (London: The Falcon Press 1952), 109.

26. See the “Thoughts on Bayonets” discussion thread on the “Gun and Game” website, <https://www.gunandgame.com/threads/thoughts-on-bayonets.123771/>, accessed October 2015.

effective fire. Appreciating the danger Corporal Sean Jones, along with three of his men, fixed bayonets and charged the Taliban over 80 metres of open ground. Evidently unnerved by this display of aggression, the Taliban retreated rather than remaining to fight it out.²⁷ As du Picq would have expected, this engagement had an important material dimension—Jones and his soldiers benefited from fire support provided by the rest of his platoon—but what evidently clinched the matter was the “moral action of manoeuvres”. Jones took the pressure off the rest of his patrol not by killing the Taliban but by forcing them to retreat in the face of his approach.

In sum, it appears that bayonet fighting is a rare event because close-range encounters between soldiers are pre-empted by a moral, or psychological, clash that determines which side gains possession of contested ground. This is consistent with the view that proxemic factors precipitate avoidance behaviour amongst the losing side. However, it remains to be seen whether the conditions under which bayonet fighting does actually occur can likewise be accommodated by a proxemic explanation.

PROXEMIC READINGS OF CLOSE COMBAT

Keegan did not provide many details of the close combat that interested him at Waterloo. Nevertheless a first-hand account exists of the fighting at La Haye Sainte, which is readily explainable in proxemic terms. Once the French succeeded in breaking into the farmhouse a period of desperate close combat ensued, conducted with muskets, bayonets and sabres. Major G.D. Græme (an eighteen-year-old lieutenant in Hanoverian service) recorded his experience of these events in a letter to his wife. Towards the end of the action Græme and his troops retreated through a narrow passageway that gave out onto a garden, at which point he tried to halt his men and counter-attack their French pursuers. This was prevented by musket fire directed at them from the opposite end of the passageway and shortly thereafter French soldiers debouched amongst his men. They were all then caught up in a fight that saw Græme acting with seemingly complete disregard for his own safety.

An Officer of our Company [Ensign Frank] called to me, “Take care,” but I was too busy stopping the men, and answered, “Never mind, let the blackguard fire.” He was about five yards off, and levelling his piece just at me, when this Officer stabbed him in the mouth and out through his neck; he fell immediately.

27. “Soldier who led Afghanistan bayonet charge into hail of bullets honoured”, *Telegraph*, 28. September 2012. Jones’ own account of events can be found at <http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/9571522/Soldier-who-led-Afghanistan-bayonet-charge-into-hail-of-bullets-honoured.html> (accessed November 2013).

More French soldiers closed in and Frank was now hit twice by musket balls, whereupon he dashed into a nearby room and hid under a bed. Thereafter a French officer seized Græme by the collar, announcing to his men, "*C'est le coquin.*" [here's the rascal.]

Immediately the fellows had their bayonets down, and made a dead stick at me, which I parried off with my sword, the Officer always running about and then coming to me again and shaking me by the collar; but they all looked so frightened and pale as ashes, I thought, "You shan't keep me," and I bolted off through the lobby...²⁸

Clearly, then, the fighting that occurred at La Haye Sainte broke with the pattern observed by the likes of Guthrie and generalized by du Picq. Here the usual reluctance to close with the enemy was overcome: prudent distancing behaviour was replaced by disregard for personal safety and by earnest efforts to kill the enemy. Frank employed his sabre in defence of a fellow officer, and retired from the fight only after being seriously wounded; Græme disregarded the threat posed by a nearby French soldier who levelled his musket at him, and subsequently took on multiple assailants, only to dash away once he sensed a degree of moral weakness amongst the French that presumably led him to conclude it was safe to do so. The exploits of both officers are, in fact, readily explicable in terms of critical reactions brought on by close-range encounters with the enemy.

There is, moreover, a great deal more evidence of critical reactions being powerfully present in situations where soldiers are suddenly brought face to face. Assembled below are some additional accounts of close combat—some just suggestive snippets, others longer and richer in terms of content. Many of them are particularly telling once one puzzles out the significance of some seemingly innocuous contextual details that attend the fighting.

Let us begin with some brief, but important, qualifications to certain observations made earlier. The first is from Jomini who, never having observed bayonet combat on an open battlefield, had nevertheless "seen *mêlées* of infantry in defiles and in villages, where the heads of columns came in actual bodily collision and thrust at each other with the bayonet".²⁹ The second is from du Picq's anonymous French infantry officer who said of the bayonet that he "only saw it used once, in the night, in a trench."³⁰ Note that these instances share some important features in common. Jomini is referring to conditions in which soldiers were likely to encounter their adversaries suddenly and at close range, perhaps turning the corner of a building or rounding a bend in a defile. Here we can easily

28. H. T. Siborne, ed., *Waterloo Letters* (London: Cassell & Company Limited 1891), 408-9.

29. Jomini, 302.

30. du Picq, 266.

imagine encounters occurring well inside the soldiers' flight distances, and also under conditions in which retreat was not possible. With formed ranks to the rear, and walls or steep banks to each side, we can reasonably conclude that the sudden appearance of a close-range threat to the front prompted a critical reaction that expressed itself in the form of bayonet fighting. As to the case mentioned by Jomini's correspondent, a trench in the dead of night would seem to provide optimal conditions for the onset of a critical reaction, combining as it does poor or limited visibility with no room for manoeuvre.

Similar conditions most likely prevailed during fighting between Canadian and German soldiers in the village of Fresnoy-en-Gohelle in May 1917. This particular action, which occurred over the course of a day and a night, was given an additional unpleasant twist by the presence of poison gas in plentiful amounts. Consequently all "the troops on both sides were wearing their gas helmets, and it was really a hand-to-hand struggle. Each one tried to tear the gas helmet from his opponent. A gas helmet pulled off a man meant his death, as the fumes were very thick."³¹ We might therefore suppose that the "hand-to-hand" quality of the battle arose not only from the particularities of night-fighting amongst buildings, but also from the presence of thick clouds of gas and the consequent need for gas helmets. Gas and helmet alike would have hindered vision, thereby increasing the chances of soldiers encountering one another at distances that were short enough to elicit some form of critical response.

Elsewhere, chance encounters in the darkness seemingly triggered reactions that teetered on the brink between aggression and avoidance. Trooper Ion Idriess served in an Australian mounted-infantry regiment during the First World War. Whilst fighting in the Middle East he recorded in his journal that each "night now sees exciting bayonet fighting in the palm oases, the advancing [Turkish] infantry, their footsteps muffled by the sand, often pass on either side of troops of our chaps—men in groups have fought jumping back with the bayonet". Idriess also described a dramatic assault on Turkish positions sited amongst a dense maze of cactus hedges. He and his fellow mounted infantry galloped up to the positions before springing from their saddles with bayonets attached to rifles.

Then came the fiercest individual excitement—man after man tore through the cactus to be met by the bayonets of the Turks, six to one. It was just berserk slaughter. A man sprang at the closest Turk and thrust and sprang aside and thrust again and again—some men howled as they rushed, others cursed the shivery feeling of steel on steel—the grunting breaths, the gritting teeth and the staring eyes of the

31. James Belton and E. G. Odell, *Hunting the Hun* (New York: D. Appleton and Company 1918), 117.

lunging Turk, the sobbing scream as a bayonet ripped home. The Turkish battalion simply melted away: it was all over in minutes.³²

This account is particularly interesting because it readily invites comparison with the fighting at La Haye Sainte described by Græme. Attackers broke their way into the position to find themselves face to face with groups of defenders. A little later we learn that visibility inside the position was down to a “few yards” because of the cactus. Soldiers therefore confronted each other suddenly and at close range, and the result was “berserk slaughter.”

Back on the Western Front, Jünger’s bout of hand-to-hand fighting in 1918 is also explicable in proxemic terms when one understands more about its tactical context. Jünger and his fellow soldiers were assaulting British positions on the “reverse slope” of an embankment—the slope that, from the German perspective, lay out of sight over the embankment’s crest.³³ Defensive positions were frequently sited in this manner because it denied an attacker accurate information about their strength and location, and complicated the task of bringing artillery fire to bear against them. It also meant that attackers cresting the hill would be silhouetted against the skyline, making them good targets for small-arms fire. In Jünger’s case the British positions seem to have been dug just beyond the crest, meaning that determined attackers were likely to press on over the hill and drop—unexpectedly—into them. Hence the close combat that occurred.

The link between close terrain, hard fighting and a high incidence of bayonet casualties is likewise made in an official British account of the conditions under which Australian and New Zealand infantry attacked Turkish positions at Gallipoli in 1915. The “difficulties were exceptionally great, and involved fighting up gullies, cliffs and ravines covered with thick scrub.” Elsewhere we learn that “fighting of the most strenuous character took place over a confused hilly country without roads or tracks, up ravines covered with thick scrub, and onto the precipitous ridges and peaks.” A subsequent discussion of the casualties observes that a “comparatively large number of wounds were bayonet wounds” and that such “wounds were rarely seen in the medical units in other theatres of war.”³⁴ Here once again we can reasonably infer that many encounters with the enemy took place at sufficiently

32. Ion L. Idriess, *The Desert Column* (Sydney: Angus & Robertson 1932), 83, 194.

33. Jünger, 257-8.

34. W. G. Macpherson and T. J. Mitchell, *History of the Great War Based on Official Documents, Medical Services General History*, Vol. IV: *Medical Services During the Operations on the Gallipoli Peninsula; in Macedonia; in Mesopotamia and North-West Persia; in East Africa; in the Aden Protectorate, and in North Russia. Ambulance Transport During the War*. (London: HMSO 1924), 11, 13-14, 32.

short ranges to trigger a critical response of the kind that would lead to desperate episodes of close combat in the confines of “gullies ... and ravines covered with thick scrub”, which in turn produced a disproportionately high level of bayonet casualties.

Another example can be found in the memoirs of Sydney Jarey, a British platoon commander fighting in Germany in 1944. The action took place whilst his soldiers were clearing a house:

Having searched all the rooms, they were about to return when they noticed a door leading to some steep stone steps into a cellar. Filled with rough wooden bunks, it had obviously served as an air raid shelter. The house having been found clear of the enemy, Jack Lee was off his guard as he descended the steps. Suddenly from under a pile of blankets leapt the only fanatical German paratrooper we encountered in the entire battle. A large man, he seized Jack Lee around the throat in an attempt to strangle him. Private Flude rose to the challenge. In a bound he was down the steps and, with a mighty lunge, transixed the German on his bayonet. A brave lad, he undoubtedly saved Lance-Corporal Lee's life just eight days before losing his own. The German was indeed unlucky as it was the only occasion throughout the campaign on which 18 Platoon's bayonets were bloodied: we usually used them to open food cans.³⁵

Here we find a great many elements of proxemic behaviour at play. The location was small and enclosed, providing no line of retreat for the German soldier. We might therefore suppose that Lee's proximity triggered a critical reaction on the part of the cornered paratrooper, causing him to leap suddenly to the attack. This is probably why he was described as the only fanatic encountered by Jarey's platoon during the battle. It was the close conditions of the encounter that prompted his seemingly fanatical attack, conditions that were not likely to be replicated on an open battlefield. Flude's reaction to the sudden appearance of the German seems to have been similar in kind: an explosive reaction brought him down the stairs—a bayonet-tipped projectile intent on the kill. But this behaviour was, understandably enough, interpreted as the bravery of a comrade rather than the fanaticism of an enemy. Finally, we are told that the whole affair was highly unusual, that bayonets (as Orwell had noted) were typically employed as can openers rather than weapons. Here again we might reasonably suppose this was because most battlefield conditions in Germany did not typically trigger critical responses amongst combatants.

Next comes a revealing account of a night attack provided by one of its participants, Captain Charles Upham. The attack was conducted by New Zealand infantry who were attempting to recapture an airfield held by German paratroopers during the battle for Crete in 1941.

35. Sydney Jarey, *18 Platoon*, 5th ed. (Winchester: The Light Infantry 2003), 107.

We went on meeting resistance in depth—in ditches, behind hedges, in the top and bottom stories of village buildings, fields and gardens on road [*sic*] beside drome... There was T.G. [tommy gun] and pistol fire and plenty of grenades and a lot of bayonet work which you don't often get in war... We had heavy casualties but the Germans had much heavier. They were unprepared. Some were without trousers, some had no boots on. The Germans were helpless in the dark.³⁶

Once again the reported facts can readily be accommodated within a proxemic reading of the attack. The close terrain over which the fighting occurred is exactly the type that would lead to short-range encounters—especially in the dark. Mention of sub-machine-gun and pistol fire, along with the liberal use of grenades, likewise suggests sudden face-to-face encounters, as these are all short-range weapons. It is therefore unsurprising to learn that there was “a lot of bayonet work”—more than usual—because the conditions were particularly conducive to critical reactions amongst the combatants. Mention of heavy casualties likewise fits in neatly here when we remember that critical reactions produce hyper-aggressive behaviour. At first glance, the point about Germans lacking boots might appear to be an unrelated detail. But even this takes on relevance when we remember that army recruits are taught never to remove their boots if there is any prospect of encountering the enemy. A soldier without boots cannot move quickly over hard or stony ground, especially when the dark conceals unknown hazards. This reduces opportunities to flee in the face of an unexpected threat, and might have resulted in Germans being run down and bayoneted as they attempted to escape.

Bayonet fighting also occurred during the aforementioned battle of Ia Drang in 1965. In one case a US trooper was astonished to see a “tall, thin sergeant bayoneting a North Vietnamese in the chest. It was just like practice against the straw dummies: Forward, thrust, pull out, move on. One, two, three.”³⁷ By now it should be unsurprising to learn that the battlefield at Ia Drang was covered with elephant grass and dotted with large termite mounds. Consequently visibility was often down to a few meters, and sudden encounters between combatants occurred frequently. In the wake of a North Vietnamese attack, one Lieutenant Neil Kroger “was found dead in his foxhole, surrounded by four North Vietnamese he had killed with his bayonet. A fifth, strangled to death, was in the hole with him, with Kroger's hands locked around his neck.”³⁸ It is not difficult to imagine how this

36. D. M. Davin, *Crete: Official History of New Zealand in the Second World War 1939-45* (Wellington: War History Branch, Department of Internal Affairs 1953), 216.

37. Moore and Galloway, 122.

38. Joseph L. Galloway, “Vietnam Story”, *US News*, 16 May 2008, <http://www.usnews.com/news/national/articles/2008/05/16/vietnam-story?page=7>, accessed May 2015.

fight played out in such close terrain. We can readily envisage the advancing Vietnamese stumbling upon Kroger's fighting position and suddenly finding themselves skewered on his bayonet. He was evidently disarmed at some point but, caught up in the moment, fought on with his bare hands. Presumably the fight ended once he was overwhelmed by superior numbers.

In 2004 combat in Fallujah also involved the use of bayonets. Fighting inside buildings was often conducted at very short ranges, and sometimes appears to have sparked critical reactions amongst the participants. In one instance US marines dashed into a room in the wake of a grenade blast and rifle fire, to be confronted with two dead insurgents. When a third insurgent leapt out of a cupboard he was shot down, but a fourth—hidden behind the door—was killed with a bayonet. In another episode two marines pursued an insurgent into a smoke-filled room. Prior to following him inside they fired at his suspected location. This left one of the marines unsure about how many rounds remained in his magazine, so he fixed his bayonet and the pair of them surged into the smoke. Encountering their adversary at close range, one of the marines knocked the insurgent over and the other "began bayoneting him ... just as he had been trained to do. He thrust the blade into his opponent, twisted his rifle, and pulled back to thrust again." Meanwhile the other marine drew his own bayonet and likewise stabbed the insurgent. They left off only once he stopped moving.³⁹ In this case, the initial fixing of bayonet to rifle indicates a degree of prudent calculation by one of the marines. Nevertheless the ferocity of the fight within the smoke-filled room, strongly implies the influence of critical reactions.

A final example is provided by Lieutenant James Adamson who in July 2008 was leading his platoon against Taliban fighters operating in the "green zone" of Helmand Province. Adamson, along with a corporal Hamilton, were wading down a river when a Taliban appeared out of a maize field that grew down to the water's edge. Hamilton shot at him, only to be forced to duck under water by the latter's return fire. A second Taliban then appeared out of the field some three or four meters away from Adamson who immediately shot him dead, emptying his magazine in the process. Faced with one enemy fighter still standing, he then leapt out of the river and killed the Taliban with a bayonet thrust to the chest. There was clearly an element of hasty calculation behind Adamson's actions: "I either wasted vital seconds changing the magazine on my rifle or ... did it more quickly with the bayonet." But once the decision was taken the rest evidently came automatically, and not even a fleeting moment of interpersonal intimacy stayed his hand. "We caught each other's

39. Lowry, 205, 215.

eye as I went towards him but by then, for him, it was too late. There was no inner monologue going on in my head I was just reacting in the way that I was trained." His adversary "was alive when it [the bayonet] went in—he wasn't alive when it came out—it was that simple."⁴⁰ Only afterwards did Adamson note that the fighter he had just killed was very young, perhaps little more than a boy.

We shall return to the question of bayonet training, and its relationship with proxemic behaviour. For now it is worth noting that Anderson already had his bayonet fixed when wading down the river, which is to say before he encountered the enemy. This was a precaution that probably saved his life on that day, and it was one that he frequently ordered his platoon as a whole to take. The reason for this was one we should now be familiar with: the nature of the terrain over which his platoon routinely operated meant that the chances of meeting the enemy at close quarters were relatively high. "The undergrowth is so dense in the 'Green zone' that I often ordered bayonets fixed because you knew the distances between you and the Taliban could be very short. It is also good for morale."⁴¹

THE PARADOX EXPLAINED

Taken together, the foregoing accounts of combat support Keegan's contention that the behaviour of soldiers is strongly influenced by their sensitivity to proxemic factors. Firstly, the avoidance behaviour observed by du Picq and others readily lends itself to an explanation framed in terms of flight distances. As the distance between attacker and defender shortens, so the imperative to halt or flee increases. The winner in what amounts to a competition of nerve is, therefore, the side whose moral purpose is the stronger. Secondly, soldiers who actually strike blows with bayonets do so in the context of sudden close-range meetings that activate a critical response in the form of a highly aggressive attack. Here, in other words, is an explanation for the paradoxical feature of bayonet fighting mentioned earlier—that soldiers are reluctant to initiate close combat, just as they are reluctant to stop fighting once they have begun.

THE UTILITY OF THE BAYONET

40. Sean Rayment, "British officer wins two gallantry awards for fending off Taliban attack with bayonet", <http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/6178044/British-officer-wins-two-gallantry-awards-for-fending-off-Taliban-attack-with-bayonet.html>

41. Ibid.

The sensitivity of soldiers to proxemic factors also suggests a counter-intuitive point about the utility of the bayonet, which is that its contribution to the outcome of battle is not principally a material one. Dramatic instances of bayonet fighting, along with the presence of bayonet wounds amongst casualty statistics, may attract our attention when they occur, but these are nevertheless epiphenomena. As far as most battlefield outcomes are concerned, the really important struggle is the invisible one that occurs in relation to flight distances, which is to say at ranges beyond which bayonet fighting occurs and stab wounds are inflicted. We should not, therefore, seek to measure the bayonet's effectiveness as a weapon by counting instances of close combat or numbers of bayonet wounds.

In this regard it is interesting to note that bayonet training has long emphasized the inculcation of aggression, as opposed to the refinement of technique. References to the "spirit of the bayonet" abound in training manuals produced during the twentieth century.⁴² Today the British Army views the benefits of bayonet training as principally "attitudinal and behavioural" in character.⁴³ Indeed, viewed from a psychological perspective, the basic components of bayonet practice—which are essentially the same the world over—appear carefully calculated to forge strong mental associations between bayonet and aggression. The subjection of soldiers to hectoring behaviour by training staff, along with all manner of unpleasant physical ordeals, is nicely calculated to incite high levels of anger amongst participants. Once this is achieved, soldiers are ordered to "fix bayonets" before being let loose on a series of dummies that are "killed" to the accompaniment of blood-curdling screams. Suitably aggressive behaviour attracts explicit approval. Soldiers are, in other words, being conditioned into associating the emotion of aggression with the presence of a bayonet on the end of their rifle, a process that is facilitated by the release of high levels of adrenalin into the system. Once this association is achieved, the act of fixing a bayonet is itself capable of generating aggression amongst conditioned subjects—aggression that helps them win the moral struggle that takes place at flight distances, thereby "pushing" the adversary into retreat.⁴⁴

42. For example: FM 23-25 *Bayonet, M1905* (Washington, DC: Government Printing Office 1940), 5; FM 23-25 *Bayonet* (Washington DC: War Department 1943), 1-2.

43. "Nerves of Steel", *Defence Management Journal* 42, http://www.defencemanagement.com/article.asp?id=354&content_name=Education%20and%20training&article=10800, accessed June 2011.

44. For a more developed account of bayonet training as associative learning see Stone, 900-01.

Dave Grossman describes an unpleasant variant of this process that was practised by the Japanese army during the early stages of the Second World War, in which soldiers bayoneted tied-up Chinese prisoners whilst their comrades cheered them on. In such a manner both the soldiers doing the bayoneting and their audience were conditioned into associating killing with pleasure. Here Grossman is concerned to make the wider point that people can readily be turned into potential killers by a whole range of associative processes that are, at first glance, far more innocuous than his Japanese example. Indeed he regards the violent content of films, television programmes and video games as a reason for the increased instance of violent crime in the United States over recent years.⁴⁵ It is therefore unsurprising that bayonet training has long been considered a potent means of facilitating aggression in soldiers, even though the bayonet itself rarely causes physical casualties in combat.

None of this is to say that the bayonet should necessarily form part of the modern soldier's equipment. Whilst armies are concerned to develop the aggression necessary for their soldiers to close with the enemy, it need not be the bayonet that provides the material focus in this regard. During the First World War, all sides adopted or improvised informal weapons that were considered superior substitutes for the bayonet in the context of trench fighting, including knives, clubs and sharpened shovels.⁴⁶ In Vietnam, some US Marines became enamoured of a commercially available tomahawk that they purchased privately. One marine apparently used his to kill three of the enemy, having had his rifle snatched away in close combat.⁴⁷ Present-day marines still undergo bayonet training, but this occurs within the context of a wider martial-arts programme that teaches various close-combat techniques, and that is also intended to foster the aggression necessary to engage an enemy at close quarters.⁴⁸ For its part, the US Army has recently dispensed with bayonet practice, but nevertheless continues to train its soldiers in other close-combat techniques. These include the use of rifles, pistols, knives, sticks and open-hand attacks at close quarters. The intention here is partly to enhance physical fitness, but also to build "personal courage, self confidence, self-discipline, and esprit de corps."⁴⁹

45. Dave Grossman, "Trained to Kill", *Christianity Today* 42/9 (1998): 30-39.

46. Frederick P. Todd, "The Knife and Club in Trench Warfare, 1914-1918", *Journal of the American Military History Foundation* 2/3 (1938): 139-53.

47. "Marines Stuck on Tomahawk", *Pittsburgh Press*, 25 February 1968.

48. USMC Manual *Close Combat* MCRP 30-02B, <http://www.combatical.com>.

49. FM3-25.150 *Combatives* (Washington, DC: Headquarters, Department of the Army 2002), 1-1.

There are, in other words, a wide range of techniques and weapons around which aggression can be inculcated by a process of associative learning. Even if they are rarely “used” in any physical sense, they are nevertheless understood to provide soldiers with the moral resources necessary to close with the enemy and win the invisible struggle that occurs at flight distances. The bayonet, along with an appropriate training regime, represents one such set of choices. It would therefore seem unwise to dismiss its enduring presence in modern warfare as symptomatic of nothing more than an atavistic military mind set.

Acknowledgements: The author would like to thank the three anonymous referees for commenting on an earlier draft of this article.

Bibliography

Belton, James and E. G. Odell, *Hunting the Hun* (New York: D. Appleton and Company 1918).

Coates, James Boyd and James C. Beyer, eds, *Medical Department, United States Army, Wound Ballistics* (Washington, D.C.: Office of the Surgeon General, United States Army 1962).

Davin, D. M., *Crete: Official History of New Zealand in the Second World War 1939-45* (Wellington: War History Branch, Department of Internal Affairs 1953).

Engen, Robert, “Killing for Their Country: A New Look at ‘Killology’”, *Canadian Military Journal* 9/2 (2008) 120-8.

Engen, Robert, “S. L. A. Marshall and the Ratio of Fire: History, Interpretation, and the Canadian Experience”, *Canadian Military History* 20/4 (2011) 39-48.

FM3-25.150 *Combatives* (Washington, DC: Headquarters, Department of the Army 2002).

FM 23-25 *Bayonet, M1905* (Washington, DC: Government Printing Office 1940).

FM 23-25 *Bayonet* (Washington, DC: War Department 1943).

Galloway, Joseph L., “Vietnam Story”, *US News*, 16 May 2008, <http://www.usnews.com/news/national/articles/2008/05/16/vietnam-story?page=7>.

Gilchrist, Harry L., *A Comparative Study of Casualties from Gas and Other Weapons* (Md.: Edgewood Arsenal 1928).

Grossman, Dave, *On Killing: The Psychological Cost of Learning to Kill in War and Society* (Boston: Little, Brown 1995).

Dave Grossman, “Trained to Kill”, *Christianity Today* 42/9 (1998): 30-39.

Guthrie, G. J., "Lectures in Some of the More Important Points in Surgery", *The Medical Times* 17 (1847-1848).

Hall, Edward T., *The Hidden Dimension* (Garden City, NY: Doubleday 1966).

Halpain, Edwin and Justin Walker, "Bayonets in Basrah – A Case Study on the Effects of Irregular Warfare" (Shawnee, Okla.: Urban Warfare Analysis Center 2009).

Hastings, Max and Simon Jenkins, *The Battle for the Falklands* (London: Michael Joseph 1983).

Hediger, H., *Wild Animals in Captivity: An Outline of the Biology of Zoological Gardens*, trans. G. Sircom (London: Butterworths Scientific Publications 1950).

Idriess, Ion L., *The Desert Column* (Sydney: Angus & Robertson 1932).

Jarey, Sydney, *18 Platoon*, 5th ed. (Winchester: The Light Infantry 2003).

Johnson, Charles Beneulyn, *Muskets and Medicine, or Army Life in the Sixties* (Philadelphia, PA: F. A. Davis Company 1917).

de Jomini, Baron, *The Art of War*, trans. G. H. Mendell and W. P. Craighill (Philadelphia, PA: J. B. Lippincott & Co. 1862).

Jones, Sean, <http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/9571522/Soldier-who-led-Afghanistan-bayonet-charge-into-hail-of-bullets-honoured.html>.

Jünger, Ernst, *The Storm of Steel, From the Diary of a German Storm-Troop Officer on the Western Front*, trans. Basil Creighton (London: Chatto & Windus 1929).

Keegan, John, *The Face of Battle* (London: Jonathan Cape 1976).

The London Gazette, 8 October 1982, Supplement 49134.

"Lewis Millett, Medal of Honor, Korean War", <https://www.youtube.com/watch?v=S9H7XplkI54>.

Lowry, Richard S., *New Dawn: The Battles for Fallujah* (New York: Savas Beatie 2010).

Macpherson, W. G., *History of the Great War Based on Official Documents, Medical Services General History*, Vol. III: *Medical Services During Operations on the Western Front in 1916, 1917 and 1918; in Italy; and in Egypt and Palestine* (London: HMSO 1924).

Majdalany, F., *The Monastery* (London: John Lane The Bodley Head 1945).

"Marines Stuck on Tomahawk", *Pittsburgh Press*, 25 February 1968.

Marshall, S. L. A., *Men Against Fire: The Problem of Battle Command in Future War* (New York: William Morrow & Company 1947).

Mecca, Pete, "The Unstoppable Journalist", *The Covington News*, <http://www.covnews.com/m/section/194/article/58895/>.

Moore, Harold G. and Joseph L. Galloway, *We Were Soldiers Once ... and Young* (New York: Random House 1992).

"Nerves of Steel", *Defence Management Journal* 42, http://www.defencemanagement.com/article.asp?id=354&content_name=Education%20and%20training&article=10800.

Orwell, George, *Essays* (London: Penguin 2014).

du Picq, Ardent, *Battle Studies Ancient and Modern*, 8th ed., trans. John N. Greely and Robert C. Cotton (New York: Macmillan 1921).

Rayment, Sean, "British officer wins two gallantry awards for fending off Taliban attack with bayonet", <http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/6178044/British-officer-wins-two-gallantry-awards-for-fending-off-Taliban-attack-with-bayonet.html>

Reister, Frank A., *Battle Casualties and Medical Statistics: U.S. Army Experience in the Korean War* (Washington, D.C.: The Surgeon General, Department of the Army 1973).

Ryan, Michael, ed., *The London Medical and Surgical Journal*, Vol. 3 (London: Renshaw and Rush 1833).

Siborne, H. T., ed., *Waterloo Letters* (London: Cassell & Company Limited 1891).

"Soldier who led Afghanistan bayonet charge into hail of bullets honoured", *Telegraph*, 28 September 2012.

Stainforth, Peter, *Wings of the Wind* (London: The Falcon Press 1952).

Stone, John, "The Point of the Bayonet", *Technology and Culture* 53/4 (2012) 885-908.

"Thoughts on Bayonets" discussion thread, "Gun and Game", <https://www.gunandgame.threads/thread/thoughts-on-bayonets.123771/>.

Frederick P. Todd, "The Knife and Club in Trench Warfare, 1914-1918", *Journal of the American Military History Foundation* 2/3 (1938): 139-53.

USMC Manual *Close Combat* MCRP 30-02B, <http://www.combatival.com>.