John Keegan, *The Face of Battle* (New York: Penguin Books, 1976).

Keegan has been describing how the English (Third and Fourth Armies) occupied a section of the long Western Front trenches in the Somme valley that was next to a section of trenches held by their French allies. The French had mostly just held the line against the Germans and had not attacked aggressively.

Allied strategy for 1916 required, therefore, a new offensive plan. Joffre decided, moreover, that it needed a new front. This was due in part to his growing recognition that a front which had been attacked was so 'thickened up' in the process – cauterized and criss-crossed with a scar-tissue of new and old trenches – that a renewal of the assault on the same spot carried a diminishing prospect of success; but in greater part to his desire to involve the British in a major offensive effort in 1916. In suspecting their disinclination to be involved, he did them an injustice; in supposing that their choice of location for an offensive might not serve his Grand Strategy, he was on to something. Haig, who had made his reputation by his defence of Ypres in late 1914, had, as soon as he assumed command of the B.E.F. in December 1915, set his staff to plan for the next great British offensive to take place there again. In selecting the Somme front, which was where the French and British sectors touched, as the focus of Allied efforts for 1916, Joffre was at least to ensure that those efforts would be jointly directed towards the defeat of the German army on French soil and under his hand – even if the method by which it would be defeated was, as he was coming privately to accept, that of *usure* – attrition – rather than the break-through in which the British still hoped and believed.

Attrition is a game at which two can play. Both the British and French had too long and easily taken for granted that the German posture on the Western Front was a defensive one. It was almost as great a psychological as physical shock, therefore, when in mid-February 1916 the Germans opened a major and quite unexpected offensive at Verdun, the lower hinge of the Western Front. From the outset the French rightly grasped that its object was to impose upon them the necessity either of making a humiliating withdrawal or of bearing a prolonged butchery. The French settled for butchery; but from the date of the offensive's outbreak, their discussions with the British lost their academic, almost reflective pace and took an urgency which became more and more desperate as the numbers of French lives lost at Verdun grew. Death or wounds had taken 90,000 Frenchmen by the end of March, only six weeks after the offensive had begun. In May, when Joffre came to visit Haig in his headquarters, it was calculated that losses would have risen to 200,000 by the end of that month. Haig conceded the need to fix an early date of the opening of the Somme offensive; he indicated the period from 1 July to 15 August. At the mention of the later date, Joffre, extremely agitated, burst out that 'the French army would cease to exist' if nothing had been done by that date. On the spot, the two generals settled for 1 July. The British would attack with a dozen divisions north of the river, the French with twenty to the south.

The Preparations

Haig's planners now busied themselves with fixing the final details. Throughout the earlier part of the year, they had been creating behind the Somme front the infrastructure of roads, railway spurs, camps, hospitals, water-pumping stations, supply dumps and transport parks without which a deliberate offensive could not be mounted in an industrial age. The most important end-product of this labour was the accumulation of artillery ammunition, of which 2,960,000 rounds had been dumped for-

ward. (By way of comparison, Napoleon probably had about 20,000 rounds with his guns at Waterloo.) Consequently, the most important element of the attack plan was the artillery programme. It was divided into two. The first instalment was to be a week-long bombardment of the German line, concentrating on the trenches occupied by the garrison but also reaching back to 'interdict' – deny the use of – the approach routes to those trenches, where those routes could be reached. The second instalment was to be the barrage. This word, the meaning of which has since been smothered in English by the weight of historical allusion attaching to it, was new to the British in 1916. Borrowed from the French, who use it to signify both a turnpike barrier and a dam (whence it has been taken into English by another route), it literally has the force of meaning 'preventing movement'. And such was the desired function of the *tir de barrage*; 'barrage fire' was a curtain of exploding shells which preceded the advance of the infantry, preventing the enemy infantry from moving from their positions of shelter to their positions of defence until it was too late to oppose the attackers' advance. In strict artillery theory, the barrage, by carefully timed 'lifts', could take the body of infantry it was protecting clean through an enemy position without their suffering a single loss from enemy infantry fire.

The only *theoretical* limit on the protection the barrage could offer was imposed by the range of the guns firing it – which meant that beyond about 6,000 yards from the gun-line, say 5,000 from the front trench, the infantry could not count on the artillery's fire reaching ground they wished to traverse. In practice 'effective' ranges were regarded as rather shorter – 'effective' having changed its meaning since Waterloo. There, as we saw, it meant 'making an effect on the enemy', something shot would not do at long range because it quickly lost its killing velocity and accuracy. By 1916, when better technology had improved velocity and accuracy ten-fold, and the bursting charge had made shells lethal even at extreme range, 'effective' fire really meant 'observable' fire, fire which fell within sight of an observation officer who could communicate with his battery and correct its guns' deflection and elevation. He was expected to

keep close behind the attacking infantry – he was also expected to be able to keep his telephone cable to his battery intact, a much more doubtful expectation – and the limit on the effectiveness of fire, therefore, was that imposed by his ability accurately to spot the fall of shot. If we estimate his effective range of vision at a thousand yards, and his distance from the leading infantry also at a thousand, we arrive at an 'effective' range for the barrage of about 4,000 yards from the front trench.

This was almost exactly the maximum distance set for the advance of each of the infantry formations on 1 July, which is not surprising, for 'objectives' were arrived at by exactly these mathematics. On some divisional fronts, final objectives were closer to the British front line if the German front position was closer. On less than half the front, however, did objectives fall on the German second position, the siting of which the Germans had, of course, determined by the same calculations of artillery ranges which underlay the planning of the British attack. The British infantry were, therefore, being asked to commit themselves to an offensive of which the outcome, even if completely successful, would leave the Germans still largely in possession of a second and completely independent system of fortification untouched by the attack. Its capture would require the hauling forward of all the impedimenta of bombardment and the repetition of the opening assault on another day, at another hour. That they were not daunted by this prospect is explained in part by the briefing that the staff had given to the regimental officers, and the officers to their men: that the real work of destruction both of the enemy's defences and men, would have been done by the artillery before zero hour; that the enemy's wire would have been scythed flat, his batteries battered into silence and his trench-garrisons entombed in their dug-outs; that the main task of the infantry would be merely to walk forward to the objectives which the officers had marked on their maps, moderating their pace to that of the barrage moving ahead of them: finally, that once arrived there, they had only to install themselves in the German reserve trenches to be in perfect safety. Had anyone yet coined the phrase, 'Artillery conquers, infantry occupies' it would have been on everyone's lips. Or would it? For the better explanation

of the army's optimism was that it was a trusting army. It believed in the reassurances proffered by the staff who, to be fair, believed them also. It believed in the superiority of its own equipment over the Germans. It believed in the dedication and fearlessness of its battalion officers – and was right so to believe. But it believed above all in itself.

The Army

The British Expeditionary Force of 1916 was one of the most remarkable and admirable military formations ever to have taken the field, and the Fourth and Third Armies, which were to attack the Somme, provided a perfect cross-section of the sort of units which composed it. Four of the thirteen attacking divisions were regular, were wholly or largely formed, that is, of long-service volunteer soldiers. The 4th Division demonstrated what type

the rest of their infantry, like all that in the 18th, 31st, 34th and 36th Divisions, was 'Kitchener' or 'New Army'. What made these battalions – 97 out of the 143 destined for the attack – so worthy of note?

First, that they were formed of volunteers. The regular

against this background that we must review the extraordinary enthusiasm to enlist which seized the male population of the British Isles in the autumn of 1914 and provided the army, in a little under six months, with nearly two million volunteer soldiers.

Among the first hundred thousand – for administrative convenience, the volunteers were called for in batches of that number – many who joined up were without work, there being, for example, a serious slump in the building trade in the summer of 1914. Some might, therefore, have been eventually impelled into the army, while others perhaps used the pretext of a national emergency to camouflage a personal one and to justify the breaking of a taboo. But, from the outset, many surrendered well-paid, steady employment to join up, coming forward in such numbers that they overwhelmed the capacity of the army to clothe, arm and train them. Kitchener, hastily appointed Secretary of State for War, had originally called for a single increment of 100,000 men to the strength of the regular army. He was, by the spring of 1915, to find himself with six of these 'hundred thousands', from which he formed five 'New Armies', each of six divisions. The two original 'hundred thousands' provided two series of six symmetrical divisions, reflecting and to a large extent corresponding with the regional division of the country: 9th and 15th were called Scottish, 10th and 16th Irish, 11th and 17th Northern, 12th and 18th Eastern, 13th and 19th Western

and 14th and 20th Light (formed from Londoners and other southerners into battalions of the rifle and light infantry regiments). But the sheer weight of the recruiting flood soon washed away the very flimsy framework of organization within which the War Office tried to contain it. The facts of demography, too, worked against their scheme, for the population of the British Isles did not neatly divide into six. The great reserves of manpower were in the northern and midland cities and in London, and it was this pattern which began to tell in the third, fourth and subsequent 'hundred thousands'. The men who had come forward in these waves chose their own titles for their units, in some cases their own officers, in almost every case their own comrades. These were the men who formed the 'Pals' Battalions'.

Perhaps no story of the First World War is as poignant as that of the Pals. It is a story of a spontaneous and genuinely popular mass movement which has no counterpart in the modern, English-speaking world and perhaps could have none outside its own time and place: a time of intense, almost mystical patriotism, and of the inarticulate élitism of an imperial power's working class; a place of vigorous and buoyant urban life, rich in differences and in a sense of belonging – to work-places, to factories, to unions, to churches, chapels, charitable organizations, benefit clubs, Boy Scouts, Boys' Brigades, Sunday Schools, cricket, football, rugby, skittle clubs, old boys' societies, city offices, municipal departments, craft guilds – to any one of those hundreds of bodies from which the Edwardian Briton drew his security and sense of identity. This network of associations offered an emotional leverage on British male responses which the committees of 'raisers', middle-aged, and self-appointed in the first flush of enthusiasm for the war, were quick to manipulate, without perhaps realizing its power. First

Keegan describes in detail which communities produced recruits for the "Pals" units, or the "Kitchener units" (that is the community-based units formed during this specific recruitment push, which were most of the soldiers attacking in the Somme).

Miners, who numbered 1.2 million in 1914, about six per cent of the employed population, and whose places of work were concentrated almost exclusively in the West Midlands, South Wales, the North-East and the Scottish Lowlands, provided a disproportionately large number of the recruits and of the units they would eventually form. So many were physically stunted that at first they failed the army's height requirement; but being otherwise robust were later formed into special 'Bantam' units, for which the height requirement was reduced to between 5 ft and 5 ft 3 ins. The spectacle of these uniformed midgets in

training touched the lowest strain of sentimentality in Hun-haring journalists, while many of the recruits, sharing nothing with the miners but their lack of stature, turned out poor fighting material and their units with them. But these were the exception. In physique, in subordination, in motivation, in readiness for self-sacrifice, the soldiers of the Kitchener armies, 'citizen soldiers' as the propaganda of the period, for once getting its categories right, called them, were unsurpassed, and were matched in quality only by the magnificent volunteer contingents provided by the white Dominions, and by the Ersatz Corps of German university and high-school students who had paid the price of going untrained to war in the *Kindermord** at Ypres in October and November 1914.

The *Kindermord*, had the Kitchener soldiers grasped its import, offered them an awful warning, for the Ersatz Corps, which outnumbered the tiny B.E.F. of 1914, had been beaten by the superior military technique of war-hardened soldiers. The Kitchener battalions had on formation, and for many months afterwards, no knowledge of military technique whatsoever. Indeed 'battalions', which implies an irreducible minimum of military organization, is a misnomer. Some 'battalions' entered into military existence when a train load of a thousand volunteers was tipped out on to a rural railway platform in front of a single officer who had been designated to command it. Few of these battalions, beyond those of the first two 'hundred thousands', were allotted more than three officers and three regular N.C.O.s, and those were often second-raters – retired Indian cavalrymen, militia colonels, disabled pensioners. Occasionally the choice was more promising (though 'choice' of course was sharply limited by the need to keep every fit and able officer in France) and the more intelligent of these instant commanding officers would send the men off in small groups for a few minutes to elect their own junior leaders, or would call for those with some experience of supervising others to accept probationary rank. Egalitarian though the mood of the Kitchener armies very distinctively was, appeals of this sort generally produced

*'Kindermord – 'Massacre of the Innocents'.

candidates, often ones whose authority was readily accepted by their fellows and could eventually be confirmed.

But, although this method yielded N.C.O.s, it did not do much to officer the new armies. The War Office was unwilling to grant commissions unless aspirants could prove their suitability, and although it devolved the power to adjudicate on to the local 'raisers', it and they shared common criteria of what 'suitable' meant. Officers had to be gentlemen. But just as the distribution of manpower failed to mesh with the regimental organization of the British army, so too did the social with the human geography of the country. Britain in 1914 was as sharply Two Nations as it had been seventy years before, so that throughout the industrial North, the West Midlands, South Wales and Lowland Scotland existed populous and productive communities almost wholly without a professional stratum and so without an officer class. Young men with the necessary qualifications – possession of the Certificate A or B granted by an Officer Training Corps was usually stipulated, though education at one of the public or better grammar schools which ran an O.T.C. was in practice often found sufficient* – were concentrated in the south and west and in half a dozen major cities. Thus there came about, during the first two years of the First World War, one of the most curious social confrontations in British history and in its long-term political implications, one of the most significant. It was almost always a meeting of strangers. It was sometimes a meeting of near foreigners. John Masters, in his description of his joining the 4th Gurkha Rifles of the old British Indian Army in the nineteen-thirties, has marvellously evoked the mutual incomprehension, good-humoured but absolute, which took hold

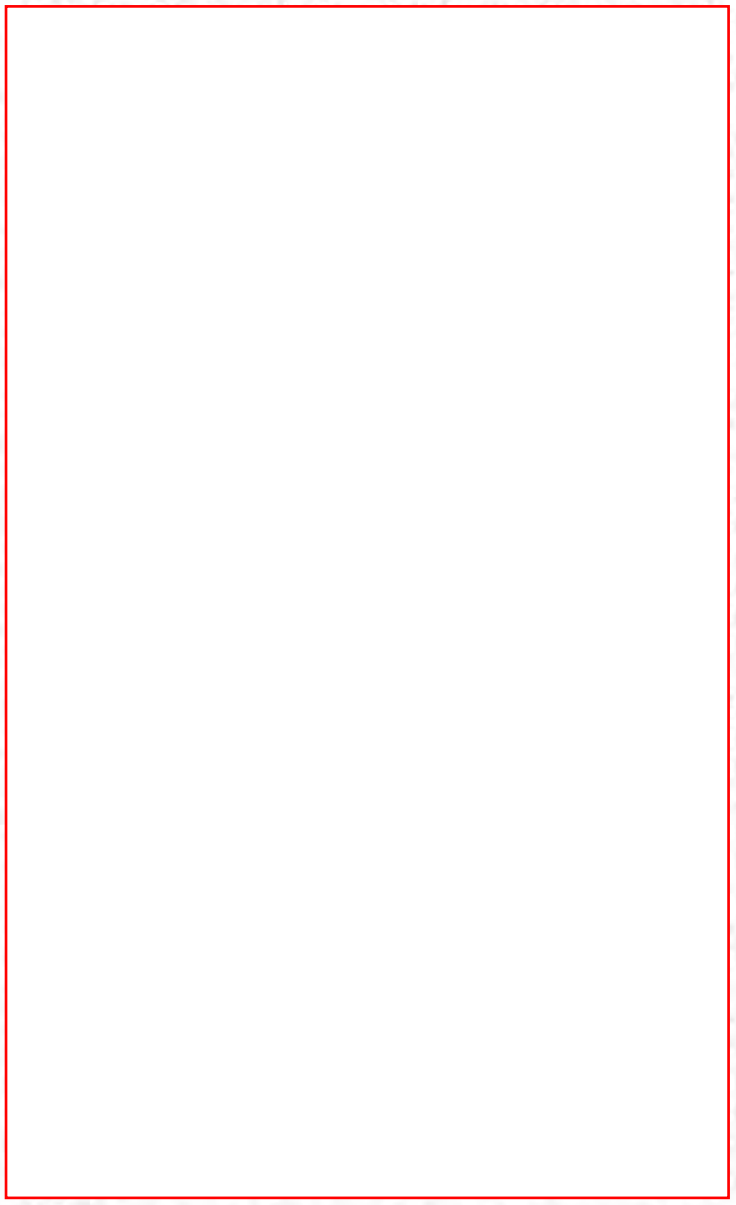
*R. C. Sherriff, author of *Journey's End*, describes his first attempt to become an officer in August 1914: '"School?" inquired the adjutant. I told him and his face fell. He took up a printed list and searched through it. "I'm sorry," he said, "but I'm afraid it isn't a public school." I was mystified. I told him that my school, though small, was a very old and good one – founded, I said, by Queen Elizabeth in 1567. The adjutant was not impressed. He had lost all interest in me. "I'm sorry," he repeated. "But our instructions are that all applicants for commissions must be selected from the recognized public schools and yours is not among them." And that was that. It was a long, hard pull before I was at last accepted as an officer. Only then because the prodigious loss of officers in France had forced the authorities to lower their sights and accept young men outside the exclusive circle!'

of a platoon and its new officer, fresh from England, when first they met. Something very similar fell upon the Kitchener armies in the winter of 1914 when nicely raised young men from West Country vicarages or South Coast watering-places came face to face with forty Durham miners, Yorkshire furnacemen, Clydeside riveters, and the two sides found that they could scarcely understand each other's speech. It was only the ardent desire on the one hand to teach, to encourage, to be accepted, on the other to learn and to be led which made intercourse between them possible. In this process of discovery, both of each other and of the military life, many of the amateur officers were to conceive an affection and concern for the disadvantaged which would eventually fuel that transformation of middle-class attitudes to the poor which has been the most important social trend in twentieth-century Britain.* Many of the Kitchener Tommies were to perceive in their officers' display of fellow-feeling an authenticity which would make attendance on that transformation tolerable. But by what strange communion did these feelings transmit themselves! Siegfried Sassoon has described how his own life was changed by the expression of total trust and self-surrender visible in the face of his men, looking up at him as they squatted cross-legged, while he inspected their feet after a route march.

Inspecting sore feet was one of those rituals of the regular army into which the Kitchener officers were earliest initiated, partly because its dotty dissimilarity from anything they had known in civilian life convinced their seniors that it was the right thing to make the subalterns do – as indeed it was in those days of unmechanical warfare, when tactical mobility depended upon marching endurance and untended blisters could cripple a whole battalion – and partly because route-marching was, in the first months of their existence, almost the sole form of training of which the Kitchener divisions could get their fill. For many months rifles, even uniforms were lacking, so that the

*'What a lesson it is to read the thoughts of men, often as refined and sensitive as we have been made by the advantages of birth and education, yet living under conditions much harder and more disgusting than my own.' Letter of 2/Lt Stephen Howett, Warwickshire Regiment (Downside and Balliol College, Oxford), written after censoring his own soldiers' letters home.

Pals' battalions could neither learn the trade of soldiers nor simulate their appearance. Only by endless drilling and marching in formation were these thousands of unblooded volunteers, still clad in civilian tweed, or a little later in postman's serge, of which 1915 yielded a strange surplus, able to remind roadside spectators, at times even themselves, that they were votaries of the Great Sacrifice. Many divisions received sufficient rifles to issue one to every man only within weeks of going to France in the autumn of 1915; and the equipments of the artillery, whose management was a great deal more complicated, were even slower to arrive. At least three divisions which were to attack on 1 July 1916, came to the Western Front in a state of training which must be described as quite deficient. The 30th, 32nd and 34th Divisions (all belonging to the fourth 'hundred thousand' – K[4] in the jargon of the period) had been raised only in December 1914, been allotted the meagrest cadre of experienced officers and N.C.O.s, had received their proper complement of weapons as late as the autumn of 1915 and yet were all shipped overseas between November 1915 and January 1916. The promise of tragedy which loomed about these bands of uniformed innocents was further heightened by reason of their narrowly territorial recruitment; what had been a consolation for the pangs of parting from home – that they were all Pals or Chums together from the same close network of little city terraces or steep-stacked rows of miners' cottages – threatened home with a catastrophe of heartbreak the closer they neared a real encounter with the enemy. Grave enough in the case of the 30th, with its three Liverpool or Manchester brigades, the threat bore even more heavily on the 34th, containing not only the so-called Tyneside Irish and Tyneside Scottish Brigades – 8,000 young men all domiciled in or around Newcastle-on-Tyne – but also a Pioneer battalion, the 18th Northumberland Fusiliers, raised by the Newcastle and Gateshead Chamber of Commerce from the shop assistants of the city: the notion of a regiment of Kippses and Mr Pollys fine-tunes the poignancy of the Pals idea.



In almost no battalion among those earmarked to attack on 1 July, therefore, had more than a quarter of the men, of whatever rank, memories of peacetime soldiering. Some of the regulars, by pulling in their Reservists and Special Reservists, could still field an almost complete turn-out of long service men. But among the remainder there was only a very little to choose, in terms of collective military experience, between the first and last joined.

The Tactics

Awareness of this lack of experience was strong at General and Fourth Army Headquarters, where the staffs had, in consequence, framed plans of stark simplicity for the infantry. The Fourth Army's eleven front-line divisions, of which six had not previously been in battle, were, on the cessation of the artillery preparation, and following behind its barrage fire, to leave their trenches and walk forward, on a front of about fifteen miles, for a mile and a half. In the centre of the front, a walk of a little less than that distance would give them possession of the German second line of entrenchments; on the northern sector, the walk to the German second position was a good two miles; on the southern sector, the German second position was judged to be too far back for it to be taken in a single day and the objectives were accordingly set somewhat closer. Next to the British on the southern sector a French force, of which the insatiable demands

of the Verdun battle progressively reduced the size until on 1 July it numbered thirteen divisions, was to attack up both banks of the River Somme, behind a great weight of artillery. French small-unit tactics, perfected painfully over two years of warfare, laid emphasis on the advance of small groups by rushes, one meanwhile supporting another by fire – the sort of tactics which were to become commonplace in the Second World War. This sophistication of traditional 'fire and movement' was known to the British but was thought by the staff to be too difficult to be taught to the Kitchener divisions. They may well have been right. But the alternative tactical order they laid down for them was over-simplified: divisions were to attack on fronts of about a mile, generally with two brigades 'up' and one in reserve. What this meant, in terms of soldiers on the ground, was that two battalions each of a thousand men, forming the leading wave of the brigade, would leave their front trenches, using scaling-ladders to climb the parapet, extend their soldiers in four lines, a company to each, the men two or three yards apart, the lines about fifty to a hundred yards behind each other, and advance to the German wire. This they would expect to find flat, or at least widely gapped, and, passing through, they would then jump down into the German trenches, shoot, bomb or bayonet any who opposed them, and take possession. Later the reserve waves would pass through and advance to capture the German second position by similar methods.

The manoeuvre was to be done slowly and deliberately, for the men were to be laden with about sixty pounds of equipment, their re-supply with food and ammunition during the battle being one of the things the staff could not guarantee. In the circumstances, it did indeed seem that success would depend upon what the artillery could do for the infantry, both before the advance began and once it was under way.

The Bombardment

The artillery fire plan was as elaborate as the infantry tactical scheme was simple. Artillery now comprised a great variety of weapons, firing several different sorts of ammunition: field artillery, the lightest and most plentiful variety, composed of 18-pounder guns and 4.5-inch howitzers, which fired small shrapnel or high explosives or (more rarely) gas shells out to a range of about 6,000 yards; medium artillery – 60-pounder and 4.7-inch or 6-inch guns which fired high explosive shells out to 10,000 yards; and a variety of heavy howitzers, 6-, 8-, 9.2-, 12- and 15-inch calibre which dropped 100- to 1400-pound shells from a high angle at ranges between five and eleven thousand yards. In addition, the infantry brigades controlled their own 'trench mortars', simple smooth-bore tubes which lobbed 2-inch, 3-inch or 4-inch bombs in a very steep trajectory from one trench to another across no-man's-land.

Range, weight of shell and trajectory determined what the different tasks of these weapons should be. Trench mortars, having the shortest range and firing a projectile without any penetrative power, were turned against near-by surface targets, the enemy's trenches, which they were intended to collapse, and his wire, which they were expected to help cut. Wire-cutting was indeed the most fundamental of the artillery's duties, for should the German entanglements remain intact on the morning of Z-Day (the day of the attack), the infantry advance would terminate on the far side of no-man's-land. The belts were very thick. Accordingly the 18-pounders of the divisional field artilleries were also assigned almost exclusively to wire-cutting – though their fire, with the shrapnel shell of the period and its slow-acting fuse, tended to waste itself in the ground *under* the entanglements (instead of bursting on 'graze' against the wire). Some of the 18-pounders' fire was also allocated, however, to 'counter-battery' – firing, that is, at the estimated position of the enemy's guns, in the hope of knocking them out before the infantry had to advance through the barrage

which those could put down on to the British parapet and into no-man's-land. What little gas shell was available was to be chiefly reserved for last-minute counter-battery fire, the British artillerymen understanding how difficult their German opposite numbers would find it to work guns while wearing gas-masks.

Howitzers and the heavier guns had the task of material destruction – of communication trenches, approach roads, railway spurs, of anything which aided the movement of men and supplies into the trenches which were to be attacked, but above all of strongpoints and machine-gun posts. These were of different sorts. In several places, notably where the German front crossed the site of a former village, the defences were notably stronger than in the open fields between. For although the Germans had excavated thirty-foot-deep dug-outs at regular intervals all along their front, which were proof against a direct hit by any weight of shell, and had thus assured that their trench garrisons would be alive even at the end of a prolonged British bombardment, these 'field' positions could not be given, without enormous extra labour, the complex illogicality presented to an attacker by the ruin of an inhabited area. In some spots, like the Leipzig salient between the devastated villages of Thiepval and Pozières, sporadic local attack and counter-attack had produced a maze of trenches as impenetrable as any ruin; and elsewhere, as at the Schwaben Redoubt, the Germans had thought it worth devoting the necessary spadework to building an artificial fortress-entrenchment. But the villages were the most important revetments of the German line; and the most important ingredient in the Germans' scheme of defence for these strongpoints was the fire of machine-guns. It was to the destruction of their emplacements, or the entombment of their crews in their positions of shelter, that the British heavy artillery was to devote its bombardment during the six days of 'preparation'.

The machine-gun was to be described by Major-General J. F. C. Fuller, one of the great *enragés* of military theory produced by the war, as 'concentrated essence of infantry', by which he meant his readers to grasp that its invention put into the hands of one man the fire-power formerly wielded by forty.

Given that a good rifleman could fire only fifteen shots a minute, to a machine-gunner's 600, the point is well made. But, as Fuller would no doubt have conceded if taxed, a machine-gun team did not simply represent the equivalent of so many infantrymen compressed into a small compass. Infantrymen, however well-trained and well-armed, however resolute, however ready to kill, remain erratic agents of death. Unless centrally directed, they will choose, perhaps badly, their own targets, will open and cease fire individually, will be put off their aim by the enemy's return of fire, will be distracted by the wounding of those near them, will yield to fear or excitement, will fire high, low or wide. It was to overcome influences and tendencies of this sort – as well as to avert the danger of accident in closely packed ranks – that seventeenth- and eighteenth-century armies had put such effort into perfecting volley fire by square, line and column. The result was to make an early-nineteenth-century – Waterloo – infantry regiment arguably more dangerous to approach than a late-nineteenth-century – Boer War – one. For though the latter had better weapons than the former, and ones which fired to a much greater range, these technical advantages were, if not cancelled out, certainly much offset by the dispersion of the soldiers which the very improvement of firearms itself enjoined – dispersion meaning lack of control, which in its turn results in poor musketry. Hence the wonder with which the machine-gun was viewed when Maxim first made it a practicable weapon of war. For it appeared to have put back into the hands of the regimental commander the means to inflict multiple and simultaneous wounding by the giving of a single word of command. But the appearance of the machine-gun was, of course, very much more than a reversion to a former order of things. For the most important thing about a machine-gun is that it is a *machine*, and one of quite an advanced type, similar in some respects to a high-precision lathe, in others to an automatic press. Like a lathe, it requires to be set up, so that it will operate within desired and predetermined limits; this was done on the Maxim gun, common to all armies of 1914–18, by adjusting the angle of the barrel relative to its fixed firing platform, and tightening or loosening its traversing screw. Then, like an automatic press,

it would, when actuated by a simple trigger, begin and continue to perform its functions with the minimum of human attention, supplying its own power and only requiring a steady supply of raw material and a little routine maintenance to operate efficiently throughout a working shift. The machine-gunner is best thought of, in short, as a sort of machine-minder, whose principal task was to feed ammunition belts into the breech, something which could be done while the gun was in full operation, top up the fluid in the cooling jacket, and traverse the gun from left to right and back again within the limits set by its firing platform. Traversing was achieved by a technique known, in the British Army, as the 'two inch tap': by constant practice, the machine-gunner learned to hit the side of the breech with the palm of his hand just hard enough to move the muzzle exactly two inches against the resistance of the traversing screw. A succession of 'two inch taps' first on one side of the breech until the stop was reached, then on the other, would keep in the air a stream of bullets so dense that no one could walk upright across the front of the machine-gunner's position without being hit – given, of course, that the gunner had set his machine to fire low and that the ground was devoid of cover. The appearance of the machine-gun, therefore, had not so much *disciplined* the act of killing – which was what seventeenth-century drill had done – as *mechanized* or *industrialized* it.

It was this automatic and inhuman lethality of the machine-gun which determined that the posts from which it would operate must be the principal target of the heavy artillery between 25 and 30 June. Unfortunately for the British infantry, the heavy howitzer of 1916 was a piece of technology very much less developed towards perfection, relative to its potential, than was the machine-gun. The desirable characteristics of the machine-gun, besides those of functional efficiency, were portability, concealability and compactness. The Maxim met the first fairly, the other two very well. The desirable characteristics of the heavy howitzer were pin-point precision and intense concussive effect. These neither the 6-, 8-nor 9.2-inch howitzer achieved (the larger calibres were too few in number to matter). Their shells had an aiming error of at least twenty-five yards

and an explosive power insufficient to collapse the very deep dug-outs – 'mined' dug-outs, the British called them, for they were driven by mining technique thirty feet below the surface – in which the machine-gunners sheltered, with their weapons, during a bombardment. Thus the British could not destroy the kernel of a German strongpoint. The best they could hope to do was to trap the crews below ground by choking the entrance shaft with spoil from the collapsed trench; but to hit the shaft, unless by luck, required either an altogether more revealing sort of air photograph than the Royal Flying Corps' cameras could supply or else constant, life-wasting raiding across no-man's-land to locate precisely where the dug-out entrances lay.

If we look, then, at the preliminaries to the attack of 1 July as a struggle between competing technologies, between the manifest power of the British artillery and the latent power of the German machine-guns, it will be seen clearly as a struggle the British waged on unequal terms – and terms which they failed to reverse, despite achieving the appearance of terrible devastation. The bombardment opened on 24 June. It was intended to last five days, but a postponement of Z-day extended it to seven. Over the period, about 1,500,000 shells from the stocks which had been dumped were fired – 138,000 on 24 June, 375,000 on 30 June. Much the greater number – about a million – were 18-pounder shrapnel shells; the 6-inch howitzers fired about 80,000, the 8- and 9.2-inch about 50,000 each. These are impressive totals. To achieve them the artillery crews had to labour, humping shells or heaving to re-align their ponderous weapons (the 8-inch howitzer weighed thirteen tons), hour after hour throughout the day and for long periods of the night. At the receiving end, the noise, shock-waves and destructive effect were extremely unpleasant. At first the Germans in the trenches opposite thought the bombardment heralded an attack and stood to arms in their dug-outs. Then, as the shelling continued, waxing and waning in strength, they realized that they were in for a long ordeal and settled down to bear it as best they could.

During 25 June ... the fire of the British ... batteries increased, and whereas on the previous day nine-tenths of the fire had been shrapnel or from guns of small calibre [shrapnel was disregarded because its

scatter of man-killing pellets was of very little effect against entrenchments], the heavy batteries seemed now in the majority. Their shells crashed into the German trenches, the ground shook and the dug-outs tottered. Here and there the sides of a trench fell in, completely blocking it. Masses of earth came tumbling into the deep dug-outs, obstructing all entrances [which of course faced *away* from the direction of the shelling] to many of them. By evening some sectors of the German front-line were already unrecognizable and had become crater-fields.*

The British next began to mix gas with their shelling, using primitive projectors and the prevailing wind-stream to carry it across no-man's-land.

In the early hours [of 26 June] clouds of chlorine gas ... reached the German position [near Fricourt] and, being heavier than air, filled every crevice on the ground. The dense fumes crept like live things down the steps of the deep dug-outs, filling them with poison until sprayers negatived their effect ... during the afternoon aerial torpedoes, fired from heavy mortars in the British front-line, made their first appearance. Coming down almost perpendicularly from a great height, these monsters bored deep into the ground and then burst. [This reference is almost certainly not to mortar bombs but to the shells of the super-heavy howitzer, fortunately for the Germans very few in number.] Tons of earth and great blocks of chalk and rock were hurled into the air, leaving craters, some twelve feet deep and fifteen feet in diameter. Only deep dug-outs of great strength could stand the shock ... The Germans, who up till now had endured the inferno almost with indifference, began to feel alarmed. Every nerve was strained as they sat listening to the devilish noise and waited for the dull thud of the next torpedo as it buried itself in the ground, and then the devastating explosion. [The similar experience of listening to the Krupp 420mm siege-howitzers 'walking' their shells up to the target had driven men hysterical inside the Liège forts in August, 1914.] The concussion put out the candles and acetylene lights in the deepest dug-outs. The walls rocked like the sides of a ship and the darkness was filled with smoke and gas fumes ... The 27th and 28th June brought a similar picture of continuous devastation ... The bombardment continued to appear without method, an intense and apparently wild shelling, then carefully observed heavy artillery fire by individual batteries, then trench-mortar bombs and aerial torpedoes or gas

*From *If Germany Attacks* by Captain G. C. Wynne.

attacks, or again a sudden tornado of shells, with occasional periods of complete quiet.

June 30th was a repetition of the previous six days. The German front defences no longer existed as such ... [But] in spite of the devastation and chaos on the surface, the defenders in those of the deep dug-outs still intact (the majority) had ... survived the ordeal. For seven days and nights they had sat on the long wooden benches or on the wire beds in the evil-smelling dug-outs some twenty feet and more below ground. The incessant noise and the need for constant watchfulness had allowed them little sleep, and ever-present, too, had been the fear that their dug-outs might at any time become a living tomb from which escape would be impossible. Warm food had seldom reached them ... so that they had had to live on [iron rations].

But they were alive.

At 6.30 a.m., however, [on 1 July] a bombardment of an intensity as yet unparalleled suddenly burst out again along the whole front. At first it was most severe in the centre, about Thiepval and Beaumont, but it spread quickly over the entire line from north of the Ancre to south of the Somme. For the next hour continuous lines of great fountains of earth, rocks, smoke and debris, played constantly into the air ... The giant explosions of the heaviest shells were the only distinguishable noises in the continuous thunder of the bombardment and short, regular intervals of their bursts gave it certain rhythm. All trace of the front-trench system was now lost, and, with only a few exceptions, all the telephone cables connecting it with the rear lines and batteries were destroyed, in spite of the six feet of depth at which they had been laid. Through the long periscopes held up out of the dug-outs could be seen a mass of steel helmets above the British parapet ... The Germans in their dug-outs, each with a beltful of hand-grenades, therefore waited ready, rifle in hand, for the bombardment to lift from the front trench to the rear defences. It was of vital importance not to lose a second in reaching the open before the British infantry could arrive at the dug-out entrances.

The battle was about to begin. And its first, and indeed decisive, act was to be the 'race for the parapet' – a race which for the British ran from their own front trench to the other side of no-man's-land, for the Germans from the bottom to the top of their dug-out steps. Whoever first arrived at the German parapet would live. The side which lost the race would die, either

bombed in the recesses of the earth or shot on the surface in front of the trench. Every British effort had been directed to ensuring that the Germans lost the race – that they would indeed lack the runners to make it a contest. But, as we have seen, the majority of the German trench garrisons still lived at zero hour on Z-Day. How had the British artillery effort been expended to such little purpose?

The greater part of the answer is revealed by isolating the proportion of active ingredient in the British bombardment; that is, of explosive delivered to the German-occupied area. The weight of shells transported to the British guns was about 21,000 tons, excluding propellant (the explosive needed to drive the shell up the barrel at the moment of firing). It had taken the efforts of about 50,000 gunners (almost the number of Wellington's army at Waterloo), working for seven days, to load this weight into their pieces and fire it at the enemy – or, more precisely, into the area, 25,000 by 2,000 yards square, which the British infantry were to attack. In crude terms, this meant that each 2,500 square yards had received a ton of shells; or, if numbers of shells are used for the calculation – and about 1,500,000 had been fired – that each 1,000 square yards had received 30 shells. However, about a million of the shells were shrapnel, fired by the 18-pounder field guns of the divisional artilleries, and these could do very little damage to earthworks, since they were filled only with light steel balls, and only a little more to wire, though it was their alleged wire-cutting capability which justified the firing of the enormous number used. In fact, the 18-pounders were set to firing shrapnel because the ammunition factories in England could not yet produce high-explosive shell for them in any quantity, though almost everyone in the B.E.F. from G.H.Q. officer to simple gunner had now come to realize that it was high explosive alone which did serious damage to an entrenched enemy.

Discounting the shrapnel, therefore, we are left with the output of the howitzers and heavy guns – about half a million shells of 12,000 tons weight. The lightest and most plentifully expended shell was that of the 4.5-inch field howitzers of the divisional artilleries, which weighed 35 pounds; the heaviest,

that of the 15-inch howitzers, which weighed 1,400 pounds – but of which there was a strictly limited ration, there being only six of these monster guns on the battlefield. Nevertheless, their contribution to the bombardment – about 1,500 shells, weighing a thousand tons – is impressive, and all the more so if we recall that Napoleon had with him at Waterloo only about 100 tons of artillery projectile in all. Comparisons between the artillery efforts of 1815 and 1916 are pointless, however, for Napoleon's gunners had had the fairly simple task of firing solid shot from close range at dense and immobile masses of soldiers upon whom a hit meant a kill; Haig's gunners, by contrast, could not see their target and could not be sure that, even if they hit it, their fire would have a lethal effect. That this should be so was due to the very small proportion of explosive contained within the casing of the shell. The 1,400-pound shell of the 15-inch howitzer, for example, contained 200 pounds of explosive (Ammatol, a mixture of TNT and Ammonium Nitrate); the 35-pound shell of the 4.5-inch howitzer contained only four pounds ten ounces. The explanation of this disparity between total weight of shell and weight of filling was twofold; the stresses to which the shell was subjected during firing required that it have a very strong, and therefore heavy, casing, if it were not to disintegrate inside the gun with disastrous effect; while the purpose of the shell, as conceived by its designers, was to produce a large number of steel splinters, travelling at man-killing speed, as a by-blow of its explosion. For that reason, most shells were fused to explode on impact, their detonation producing those enormous fountains of earth and smoke which are the staple feature of First World War battlescapes.

It is these fountains which give the game away. Out of the 12,000 tons, weight of shell delivered on to the German-occupied area, only about 900 tons represented high-explosive. And the greater part of that small explosive load was dissipated in the air, flinging upwards, to be sure, a visually impressive mass of surface material and an aurally terrifying shower of steel splinters but transmitting a proportionately quite trifling concussion downwards towards the hiding places of the German trench garrisons. Each ten square yards had received only a pound of

high-explosive, or each square mile about thirty tons. Twenty-eight years later, the Allied air forces would put down on German positions in Normandy, and in minutes not days, something like 800 tons of bombs to the square mile, most of that tonnage consisting of high-explosive, for free-falling bombs, being unsubjected to stress, can be given the thinnest and lightest of cases. Today, NATO tactical doctrine would regard the Somme position as a suitable target for several small nuclear warheads, each of which would yield many thousand tons of TNT-equivalent to the square mile. But some of the defenders, if properly dug in under overhead cover, would still be expected to survive – as many German soldiers who cowered under the aerial preparation for Operations Goodwood and Cobra in July 1944 survived to man their weapons against the British and American tank columns which emerged through the dust of the bombing.

We can see now, therefore, that the great Somme bombardment, for all its sound and fury, was inadequate to the task those who planned it expected of it. The shells which the British guns had fired at the German trenches, like those which a month earlier had broken up on the armoured skins of the German battleships at Jutland, were the wrong sort of projectile for the job, and often badly made. And while the British naval gunners had been able to see, and knew how to hit, their targets, the British field and garrison gunners, many of them amateurs, had largely to guess at where their real targets, the German machine-gun crews, were hidden, and then very often lacked the skill to put a shell where they wanted it to fall. Hence, despite the precision of the fire plan, that haphazard cratering of the battlefield, sometimes on, sometimes beyond, sometimes short of the German trench line and wire entanglements, which all observers of the Somme front mention.

The Final Preliminaries

The infantry, fortunately, remained largely unaware of the random and unsatisfactory result of the shelling which had filled their ears with sound for the last week, during every hour of the day and many of the nights. There was a good deal of individual apprehension. 'It was the Division's first battle,' wrote the historian of the 18th, 'and the solemnity of the occasion affected everyone.' Private Gilbert Hall, of the 1st Barnsley Pals (13th York and Lancs) was not feeling quite himself and had got a headache from the bombardment. Capt. E. C. T. Minet, machine-gun officer of the 11th Royal Fusiliers, felt himself 'sweating at zero hour. But that, I suppose, was nervous excitement.' Private Frank Hawkings, of Queen Victoria's Rifles, had found since 29 June 'the suspense very trying and everyone ... very restless'. But the long notice of the battle which everyone who was to be in it had been given – a new development in warfare and a function of the complex preparation which battles of the industrial age require – had allowed men the chance to make what personal accommodation with their fears they could. Most had written home, made out their wills, shaken hands with their pals. Many had gone to church. Each battalion of the B.E.F., the army of a church-going age and nation, had its own chaplain of the appropriate denomination, and they had held services behind the lines a day or two beforehand. Second-Lieutenant John Engall, of the 16th London Regiment, wrote home 'the day before the most important of my life ... I took my Communion yesterday with dozens of others who are going over tomorrow and never have I attended a more impressive service. I placed my body in God's keeping and I am going into battle with His name on my lips, full of confidence and trusting implicitly in Him.' Like so many other subalterns of the London division, Engall was to die outside Gommecourt. His explicit piety, which would have jarred with most of Wellington's ensigns, came as naturally to him as to them their stylish indifference. But it would not necessarily have surprised them;

the attendance at (Anglican) Communion of 'the dozens of others' – private soldiers of his regiment – most certainly would have done. The irreligiosity of their private soldiers was part and parcel of an altogether rougher persona than even the most hardened old-sweat regiments of 1914 could show.

It was a help, too, in calming fears that the last hours before zero were filled for most infantry soldiers with a carefully time-tabled programme of activity. The attacking battalions, which were out of the line, had to march up to the trenches from the villages where they had been billeted, first along the roads, then in the communication trenches which covered the last mile. On the way the men accumulated a growing load of kit. Starting with 200 rounds of ammunition and two days' rations, they successively picked up new empty sandbags (to fortify the positions they were to take), a wiring stake (for the same purpose), grenades, shovels, rockets and sometimes pigeon baskets, the two last items to help their officers communicate with the rear once they had passed beyond cablehead in the front trench. All this took a great deal of time, and the columns had also to press forward against the flow of men coming down the trenches from the battalions which were being relieved. When they arrived at their jumping-off places, the men were glad to huddle under a blanket or greatcoat on the floor of the trench and sleep.

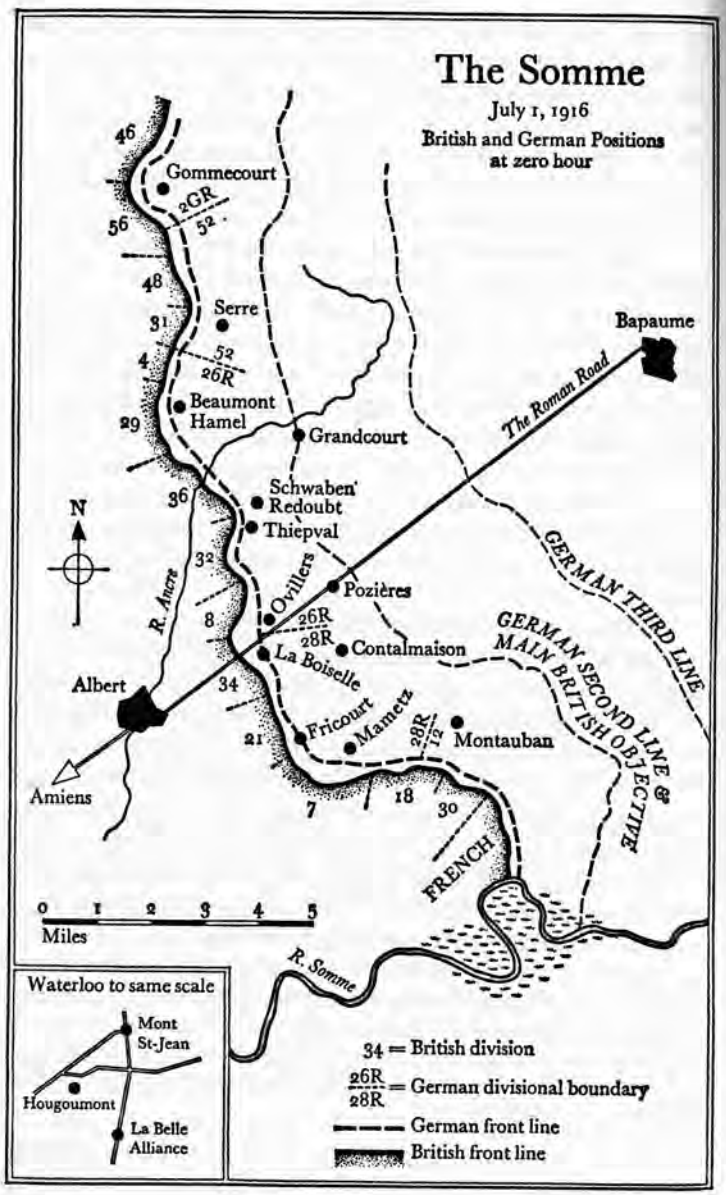
Most awoke early, to find a light rain falling through white morning mist. In places it lingered even after the bombardment had struck up at 6.25 a.m. for the regular morning session, so that Lieutenant Chetwynd-Stapleton, on air patrol above the front, saw 'a bank of low cloud' on which 'one could see ripples ... from the terrific bombardment that was taking place below. It looked like a large lake of mist, with thousands of stones being thrown into it.' Across the greater breadth of the front, however, the mist quickly cleared, giving way to bright sunshine from a brilliant cloudless sky. Into it little plumes of smoke rose here and there from the British front where men were furtively cooking breakfast. Orders were for soldiers to be fed with food sent from the rear, and in the best organized battalions it arrived, prompt and hot. Lieutenant-Colonel Crozier, commanding the 9th Royal Irish Rifles (the West Belfast Battalion

of the Ulster Volunteer Force), congratulated his cook-sergeant on having bacon rashers, fried bread, jam and tea ready for his riflemen, and a mixture of cold tea and lemon to go into their water-bottles for the trip across no-man's-land. Officers were being brought hot water in which to shave, and were tidying their uniforms, still conspicuously different from the soldiers', unless they belonged to battalions in which it was not thought bad form to don rough Tommy serge. Major Jack, commanding a company of the 2nd Cameronians, put on his silver spurs for the occasion, and his soldier servant gave him 'a final brush'. Few, if any, were to wear swords (though even temporary officers were still buying swords on commissioning) but all carried sticks, polished blackthorn with a silver band in the Irish regiments, malacca canes or ashplants with a curved handle, of the sort sold by seaside tobacconists, in others. Some carried nothing else, not even a revolver, thinking it an officer's role to lead and direct, not to kill – the need for which, in any case, they believed would have been nullified by the bombardment.

Between 6.30 and 7.30 a.m., the noise of the bombardment reached a level not yet touched, as weapons of every calibre and sort put down their final ration of shells on the German front trenches. Hawkings, of Queen Victoria's Rifles, had been watching a lark climb into the sky opposite Gommecourt, when the artillery, which had hitherto been firing spasmodically,

> suddenly blazed out in one colossal roar. The dull booms of the heavy guns in the rear could just be discerned amidst the sharper and incessant cracks of the 18-pounders and 4.7s that were closer to the line. There seemed to be a continual stream of shells rumbling and whining overhead on their way to the enemy positions, where the succession of explosions added to the general noise. Fifteen-inch howitzer and 9.2 shells were falling in Gommecourt Wood, whole trees were uprooted and flung into the air, and eventually the wood was in flames. The landscape seemed to be blotted out by drifting smoke; but as part of our scheme was to set up a smoke screen we commenced throwing out smoke bombs.

Under the weight of this cannonade, the Germans crouched invisible in their dug-outs, waiting for the moment it should



lift as the signal to race up exit shafts. Meanwhile the soldiers of the 1st Somerset Light Infantry sat on the parapet of their trench opposite, laughing and cheering at the sight of the detonations.

Some other soldiers were also already out of their trenches, where the last thing almost everyone had received was a strong tot of rum – Navy rum, and extremely alcoholic. In the 11th Suffolks, two men who had got the teetotallers' share drank themselves insensible and could not be got on to their feet again; and J. F. C. Fuller, investigating a confusion in the Sherwood Forester Brigade, was told that the whole of the leading wave was drunk. He thought the story an exaggeration – which it almost certainly was – but, knowing that 'in many cases men deliberately avoided eating before a battle, for fear of being shot through a full stomach' and discovering that 'through some error' the first line got the rum ration intended for the second as well as their own, he concluded that 'many of the men in the front line must have been drunk well before zero hour.' A strong tot of rum, whatever its functional effect, must have been particularly comforting to the men in those divisions whose commanders had decided to take them out of the trench to lie down in no-man's-land before zero – the 8th, 36th, 46th and 56th and part of the 32nd.

The signal for these men to stand up and advance, for those in the trenches to climb their scaling ladders and leap over the parapet into no-man's-land, was to be the shrill of the platoon officers' whistles, blown when their synchronized watches showed 7.30 a.m. In four places, however – Mametz on the 7th Division's front, Fricourt (21st Division), La Boiselle (34th Division), and Beaumont Hamel (29th Division) – the signal, about ten minutes ahead of zero, was to be the detonation of eight enormous mines which had been tunnelled under the German trenches and filled with dynamite.

The Battle

Despite the immense growth of complexity of the machinery and business of war which had taken place in Western armies since 1815, the Battle of the Somme was to be in many ways a simpler event than Waterloo – not, indeed, in terms of the strains of management it threw on commanders and their staffs, but in the range and nature of the encounters between different categories of armed groups which took place on the ground. At Waterloo we counted seven different sorts of encounters: artillery versus artillery, infantry and cavalry, cavalry versus cavalry and infantry; infantry versus infantry; and single combat. Several of these could or did not occur on the Somme. The horse, for example, had disappeared from the battlefield, though to the regret of almost every soldier – even infantry officers speak lovingly of their horses – and temporary work in the transport section of infantry regiments was eagerly sought after by the men, who seemed to find in caring for animals an outlet for the gentler emotions to which they could give no expression among their fellows. Haig had had three cavalry divisions brought up to the Somme front, but they were neither expected to, nor did they, play any part on 1 July, or any other day in 1916. Single combat, too, had ceased to be an option, for soldiers on a bullet-lashed battlefield could neither assume the posture nor risk the exposure-time necessary for the exchange of blows, even if haphazard encounter brought them together. The nearest thing to single combat in trench warfare ('him or me' bayonet thrusting excepted), was perhaps the game of 'bombing up the traverses', of which the most striking feature, so characteristic of the First World War, was that one did not see one's enemy. Thus there were only three sorts of encounter possible on the field of the Somme: artillery versus artillery; artillery versus infantry; and infantry versus infantry – though, if we treat machine-gunners as a separate category, we also get infantry versus machine-gunners and artillery versus machine-gunners.

We have already seen how much or little success artillery had had in attacking infantry and machine-gunners, and in attacking other artillery. Many of the German batteries had had guns disabled and crews killed during the preliminary bombardment. But enough remained to put down spoiling bombardments on the British front trenches at the moment of the attack – a company of the Queen Victoria's Rifles, crowded into their assembly trenches, were struck by a sudden stream of shells at about 7 a.m. and had forty men killed or wounded in a few minutes – and to fire standing barrages into no-man's-land the instant they got the signal that the British had left their trenches. These sorts of encounter apart, how did the infantry fare, on both sides, once the British had left their trenches to advance to the assault?

Infantry versus Machine-gunners

Several survivors have left accounts of the first moments of the attack. Queen Victoria's Rifles, a leading battalion of 56th London Division in VII Corps' diversionary attack on the northern flank of Fourth Army, had about 500 yards of no-man's-land to cross; Royal Engineer companies laid smoke from dischargers to cover their advance. Some time after seven o'clock, the Germans 'began spraying our parapets with machine-gun bullets, but sharp to the minute of zero' (7.25 a.m. for this division) 'we erected our ladders and climbed out into the open. Shells were bursting everywhere and through the drifting smoke in front of us we could see the enemy's first line from which grey figures emerged . . . We moved forward in long lines, stumbling through the mass of shell-holes, wire and wreckage, and behind us more waves appeared.' Towards the centre of the Fourth Army's front, the 9th Royal Inniskilling Fusiliers, of the 36th Ulster Division, were in the leading wave. Their commanding officer, Ricardo,

stood on the parapet between the two centre exits to wish them luck . . . They got going without delay, no fuss, no running, no shouting,

everything solid and thorough – just like the men themselves [these were farming people from County Tyrone]. Here and there a boy would wave his hand to me as I shouted good luck ... through my megaphone. And all had a cheery face. Most were carrying loads. Fancy advancing against heavy fire with a big roll of barbed wire on your shoulder!

Describing a second wave attack, in an account which holds good for the first, Gilbert Hall of the 1st Barnsley Pals (13th York and Lancasters, 31st Division), heard his officer blow his whistle 'and C Company climbed over the parapet and moved forward to be confronted with ... a long grassy slope rising gently to a series of low crests about six hundred yards in front. The German trenches were clearly visible, three lines of fortifications with sand-bagged parapets, enabled by the slope of the ground to fire over each other into the advancing British infantry. In front of the enemy lines lay thick belts of uncut wire, breached by a few narrow gaps.' Towards that wire the Barnsley Pals set off, as up and down the line at zero did 60,000 other infantrymen. In some battalions, the men were able to walk upright, with arms sloped or ported, as they had been expecting. In others they were soon bent forward, like men walking into a strong wind and rain, their bayonets fixed and their rifles horizontal. 'Troops always, in my experience,' wrote Lord Chandos, whose observation this is, 'unconsciously assume this crouching position when advancing against heavy fire.'

Most soldiers were encountering heavy fire within seconds of leaving their trenches. The 10th West Yorks, attacking towards the ruined village of Fricourt in the little valley of the River Ancre, had its two follow-up companies caught in the open by German machine-gunners who emerged from their dug-outs after the leading waves had passed over the top and onward. They were 'practically annihilated and lay shot down in their waves'. In the neighbouring 34th Division, the 15th and 16th Royal Scots, two Edinburgh Pals' Battalions containing a high proportion of Mancunians, were caught in flank by machine-guns firing from the ruins of La Boiselle and lost several hundred men in a few minutes, though the survivors marched on to enter

the German lines. Their neighbouring battalions, the 10th Lincolns and 11th Suffolks (the Grimsby Chums and the Cambridge Battalion) were caught by the same flanking fire; of those who pressed on to the German trenches, some, to quote the official history 'were burnt to death by flame throwers as [they] reached the [German] parapet'; others were caught again by machine-gun fire as they entered the German position. An artillery officer who walked across later came on 'line after line of dead men lying where they had fallen'. Behind the Edinburghs, the four Tyneside Irish battalions of the 103rd Brigade underwent a bizarre and pointless massacre. The 34th Division's commander had decided to move all twelve of his battalions simultaneously towards the German front, the 101st and 102nd Brigades from the front trench, the 103rd from the support line (called the Tara-Usna Line, in a little re-entrant known to the brigade as the Avoca Valley – all three names allusions to Irish beauty spots celebrated by Yeats and the Irish literary nationalists). This decision gave the last brigade a mile of open ground to cover before it reached its own front line, a safe enough passage if the enemy's machine-guns had been extinguished, otherwise a funeral march. A sergeant of the 3rd Tyneside Irish (26th Northumberland Fusiliers) describes how it was: 'I could see, away to my left and right, long lines of men. Then I heard the "patter, patter" of machine-guns in the distance. By the time I'd gone another ten yards there seemed to be only a few men left around me; by the time I had gone twenty yards, I seemed to be on my own. Then I was hit myself.' Not all went down so soon. A few heroic souls pressed on to the British front line, crossed no-man's-land and entered the German trenches. But the brigade was destroyed; one of its battalions had lost over 600 men killed or wounded, another, 500; the brigadier and two battalion commanders had been hit, a third lay dead.* Militarily, the advance had achieved nothing. Most of the bodies lay on territory British before the battle had begun.

In the neighbouring 32nd Division, the 16th Northumberland

*In the Tyneside Scottish Brigade, all four battalion commanders were killed on 1 July.

Fusiliers (Newcastle Commercials) and the 15th Lancashire Fusiliers (1st Salford Pals) were also hit by machine-gun fire from Thiepval as they got out of their trenches, the Newcastle Commercials following a football kicked by a well-known north country player. Several waves were cut down at once and the commanding officers ordered the untouched companies to stay in their trenches. In the swampy valley of the Ancre, several battalions of the Ulster Division were enfiladed by German machine-guns as the men tried to cross no-man's-land, there 400 yards wide. Casualties were worst in the 9th Royal Irish Fusiliers (the Armagh, Monaghan and Cavan battalion of the U.V.F.), 532 officers and men going down as rush after rush towards the wire – orthodox tactics learnt on Irish hillsides in make-believe battles four years before – was stopped by bursts of bullets; losses in two others were almost as heavy. In the regular 29th Division on the Ulstermen's left, several battalions suffered the worst of First World War experiences: to advance across no-man's-land under heavy fire only to find the enemy's wire uncut (it was uncut at many places elsewhere also) and to be machine-gunned down while searching for a way through. Among them were the 1st Royal Inniskilling Fusiliers, the same Inniskillings who had stood in square to be cannonaded throughout the afternoon near the crossroads at Waterloo 101 years before. Opposite Beaumont Hamel, fired on by German machine-gunners who had emerged from the recesses of Y Ravine, into which the Division's amateur gunners had tried but failed to drop a shell during the bombardment, 568 Inniskillings became casualties in a few minutes, of whom 246 died. Shortly afterwards the only battalion from the Empire to take part in the Somme attack, the 1st Newfoundland Regiment, raised exclusively from native-born Newfoundlanders, tried to find a way where the Inniskillings had found none and in the attempt lost more men killed, wounded or missing – 710, including all the officers – than any other battalion was to do on 1 July (though the 10th West Yorks had just lost exactly the same number opposite Fricourt, on the 21st Division's front). Finally, on the 46th (North Midland) Division's front, at the extreme northern edge of the battlefield, the 1/6th North Staffs and the 1/6th

South Staffords, Territorial battalions from Wolverhampton and Hanley, each had their leading companies caught by fire opposite uncut wire, on which most who arrived there were shot or bombed by the defenders.

Infantry versus Infantry

Perhaps twenty battalions of the attacking force, out of sixty committed to the first wave, had thus been disabled in no-man's-land by machine-gun fire, to which they had been unable to reply and whose source they had generally been unable to identify. A number had also suffered casualties from German barrage fire – true barrage fire, in that it took the form of a continuous fall of shells along a predetermined line in no-man's-land – laid by guns which had either escaped destruction by the British batteries or had remained 'masked' (present but silent, and so undetectable), or else had arrived on the Somme front towards the conclusion of the bombardment – an event which had given the German high command all the notice to reinforce any general could require. The barrage had been particularly heavy on VIII Corps' front, perhaps because its gunners were notably less well-trained even than the rest in that underskilled army; it was there that there was most uncut wire, additional proof of incompetent gunnery.

But for the battalions which had got through, the worst, in a collective sense, was now over, for entry into the German positions meant that the German gunners could no longer put down on them a barrage, their own troops being mixed up with the attackers, while the attackers themselves could take advantage of the Germans' own trenches to shelter from the German infantry's bombs and bullets. In practice, things were less simple and far more dangerous than this thumbnail analysis suggests, for the British could not remain in the German trenches they had reached, having objectives to reach which lay much deeper within German trenches, yet *had* to remain to fight for a while if they were not to be attacked in the rear when they

pushed on. The Germans, moreover, had enough of their telephone cable network intact sometimes to be able to inform their batteries which trenches were in British hands, and so to be able to call down fire on them. The British had no such link with their artillery, the telephone lines they had trailed across no-man's-land having almost without exception, and to no one's surprise, been cut. As a result, and to complicate the pattern of activity in those battalions which had entered the German front line, the attackers were under an obligation, both to consolidate – clear the captured trench of any resisting Germans – and to 'follow the barrage' – to walk off whither the next curtain of shellfire played on the second or third line of German trenches or on an intervening 'shellhole position'; some divisional artilleries had allowed for as many as six of these 'lifts'.

Following a shrapnel barrage was, for all the tumult produced, not in itself a dangerous thing to do, given accurate gunnery, for the cast of shrapnel is forward, only the occasional base-plate whining back to inflict injury on the infantry behind. By late 1917 British infantrymen had learnt, and were glad, to walk as close as twenty-five yards in the rear of a boiling, roaring cloud of explosive and dust, accepting that it was safer to court death from the barrage than to hang back and perhaps be killed by a German whom the shells had spared and one's own tardiness allowed the time to pop up from his dug-out. In July 1916, however, few gunners knew how to make a barrage 'creep' at a regular walking pace across a piece of enemy-held territory and, prudently, few infantrymen would risk approaching too close to a barrage line until they saw it lift and move to the next target. The consequence was that the advance, even when it worked to plan, took the form of a series of discontinuous and quite literally breathless jerks forward, the lift of the barrage to the next objective being the signal for the waiting infantry to leave their positions of shelter and race the intervening two or three hundred yards to regain its protection. For the 18th and 30th Divisions, flanking the French at the extreme southern end of the battlefield, this programme worked very well, and both gained all their objectives within the limit of time set, though each at the loss of about 3,000 casualties. They benefited,

however, from their proximity to the French, whose gunnery, after two years of war, was much superior to the Royal Artillery's, and whose infantry, here belonging to the XX Corps, were among the best soldiers on the western front. The British III Corps' advance was, therefore, in the language of the period, to some extent a 'sympathetic' one.

Where, farther north, the British had to make their way alone, most battalions, even if they managed to get into the German trenches, sooner or later 'lost' the barrage, which they had to watch grinding noisily and remorselessly away from them, according to a pre-arranged timetable, and could only very rarely and with the greatest difficulty recall to work over the objective on which they were stuck. The reasons for this 'loss' of the barrage were everywhere the same: the infantry arrived in the German front trench either too disorganized by losses to be able to push on at the time required, or else were held there so long by the resistance of the German defenders that the barrage left without them, or else, exhausted by physical effort and nervous strain more quickly than the staff had allowed for, stopped to rest.

Exhaustion was what stopped the advance on the northern sector of the 21st Division's front, after a very brave and quick rush had carried the two leading battalions of the 64th Brigade deep into the German position. Despite heavy losses from machine-gun fire in no-man's-land, the 9th and 10th King's Own Yorkshire Light Infantry crossed it, found good gaps in the German wire, shot or bombed the defenders who opposed them and took the front trench. Joined there by their support battalions, the 15th Durham Light Infantry and the 1st East Yorkshire, they moved on behind the barrage to the next German trench, from which they extracted and sent back about 200 German prisoners. All this had taken about ten minutes, during which half of the soldiers and most of the officers had been killed or wounded. The barrage now moved forward, and the battalions were still able to follow, but they now came across more and more Germans, hidden in shell-holes or bits of trench, who threw bombs or opened fire with their rifles. At the end of half an hour from zero, by which time they had covered

a mile of ground from their own front line, the Yorkshiremen reached an old sunken road. Here the majority stopped – 'a general halt was called' is the euphemism employed by the official historian – though some parties from all four battalions went on a little farther, to Crucifix Trench, the brigade's first objective. Five hundred yards ahead, Germans had begun to fire machine-guns from positions hidden in woodland and now 'the barrage had passed on'. The 9th and 10th K.O.Y.L.I.'s advance was over for the day, the men too worn out by fatigue and fear to go any farther themselves, the officers who might have led them dead or wounded. After a long delay, news of the circumstances reached those 'L.O.O.B.' – Left Out of Battle to form a cadre if losses were very heavy – and one of the officers, a young captain, Basil Liddell Hart, went forward through German machine-gun fire to take command. He remained with survivors throughout the afternoon, while men were killed and wounded in a succession of British attacks and German counter-attacks. At nightfall they were withdrawn.

On the 8th Division's front, it was disorganization that caused the British battalions to lose the barrage. The German artillery opposite was unsubdued and put down a heavy fire into no-man's-land as soon as the infantry reached to within eighty yards of the wire. They had already suffered from long-range machine-gun fire during the process of scaling the British parapet, filing out through the gaps in their entanglements, forming up into waves (each battalion was in four waves at fifty paces distance), and marching across no-man's-land, here, in places, 800 yards wide. Under the lash of the German barrage, the British infantry broke formation and rushed the wire. At several spots the survivors got into the German front trench and even beyond it. But most of their officers had gone down and the groups of attackers were small and separated from each other. Guessing at their circumstances, one of the commanding officers, Lieutenant-Colonel Bastard of the 2nd Lincolns, crossed no-man's-land alone from the British side, collected his scattered soldiers and those of a neighbouring battalion and organized a stretch of the captured trench for defence. The British barrage, which might have helped him in this, was now

far ahead, playing on positions which the British had no hope of reaching, let alone taking, and it was not until 9.15 a.m., nearly two hours after zero, that the matter of recalling it was even discussed between the divisional commander and his brigadiers. They then told him that there could be no question of renewing the attack with their broken brigades and that to put down a barrage again on the German front line might kill more friends than enemies. So there things were left. Bastard and his handful eventually withdrew.

The most frustrating circumstances in which to lose the barrage were those experienced by battalions which got more or less intact into the German lines but there encountered such resolute resistance that they were unable to leave on schedule for the next objective. Typical of such an experience, though such experiences were rare on 1 July, was that of the London Scottish. Part of the 56th London Division, which had been given the diversionary role of attacking the Gommecourt salient to the north of Fourth Army's front, the London Scottish was one of the most famous Territorial and best of all battalions in the B.E.F. First of the Territorial infantry to land in France, it had fought at the First Battle of Ypres in 1914, Givenchy, Festubert and Loos in 1915 and had been in line opposite the Gommecourt salient since early May. Gommecourt was an exceptionally strong sector of the trench-line, where the terrain favoured the defenders, who had done much over the years to improve on it, and was garrisoned by an excellent German division, the 2nd Guard Reserve. German batteries were numerous, the fire of those of the attacked divisions being supplemented by that of batteries still farther to the north, beyond the limit of the British offensive. Yet the London Scottish, together with the other London Territorials, Queen Victoria's Rifles, the Queen's Westminster Rifles, the Rangers, the London Rifle Brigade, were confident of their ability to get into the German position and secure it.

Their confidence was justified. The barrage plan allotted them half an hour to clear their objectives and join hands with the 46th North Midland Division's leaders, who were to attack concentrically. Leaving their trenches behind a smoke screen

at 7.30 a.m., the London Scottish were at once caught by a severe standing barrage in no-man's-land, but pressed on and, though several officers lost direction in the smoke and led their men to the wrong sector of trench, got almost everywhere into the German front line. In several places the Germans had abandoned it, probably deliberately, at the Scots' approach, so there and elsewhere they were able to press on quickly to the German second trench. On the right, one of the companies was able to reach and overpass its objective, retiring when it discovered its mistake. On the left, D Company had met heavier resistance all along and could not reach its final objective, a fourth trench line beyond the three it had already captured. The time was now 8 a.m. and the divisional artillery shifted its fire, as the timetable required, to the expected point of junction with the 46th Division, far away on the London Scots' left. That left them to their own devices. Worse, they were now physically isolated for the German standing barrage did not move, continuing to rain down a curtain of shells in no-man's-land all morning and afternoon, preventing the movement of essential supplies from the British to the captured German trenches.

A fresh supply of ammunition and bombs, particularly bombs, were what quickly became essential to the Scots. For in their isolation they were subjected to a series of counter-attacks by the Germans, who now surrounded them on three sides. These counter-attacks provide an excellent example of what trench fighting in the First World War was like and why it took the form it did.

The weight of fire overhead, from both field-guns and machine-guns, kept attackers and defenders alike in the trenches. The trenches, nevertheless, gave them access to each other, being part of a continuous system or grid, fire trenches running in one direction, communication trenches athwart them in another. The two sides, however, would rarely see each other, because both fire and communication trenches were 'traversed' – dug in angular kinks to deny an attacker the chance of firing down the whole length of the trench and to localize the blast of any shell which fell into it. In these circumstances, friend and foe

could approach very close without being able, though aware of each other's presence, to do each other much harm in the conventional way. An impasse could result – to be resolved sometimes by an individual or group on one side or the other deciding to 'go out over the top' or 'go above ground'. Sergeant Gurney of D Company was killed doing that during the initial advance, jumping up the side of the trench to get at some Germans who were holding up the attack round a corner. The normal method of resolving the impasse, however, was by 'bombing', the throwing of a hand-grenade over the top of the traverse, and running round to arrive just after it exploded. If played seriously, it was an extremely dangerous game, for one could run into the explosion of one's own grenade, or into the fire of an unwounded enemy soldier, or into the grenade of someone bombing from the next traverse up. Equally, it could be nearly a sham combat with the two sides sticking prudently to their own traverses and the grenades falling harmlessly in the bay between them. Here in the trenches which the London Scottish had captured it became something else: a static attritional affair, the Scots having blown in several sections of trench around them, using explosives brought by accompanying Royal Engineers, and so having enclosed themselves in an earthwork stockade. Inside it they ought to have been secure and could have expected eventually to have the section of trench they had captured incorporated in the British system on the other side of no-man's-land by new digging. Several circumstances militated against this outcome: they were overlooked from three sides; the trenches had been so knocked about by the British bombardment that the occupants were exposed to fire in many places; the Germans had artillery available to bombard them from close range, and fresh infantry to deliver counter-attacks; the barrage in no-man's-land prevented either supplies or reinforcements from crossing. On the far side, the London Scots' commanding officer, who had been Left Out of Battle, became aware of his companies' plight, and got together a relief party. It set off in three groups between 9 and 10 a.m., each burdened with bandoliers of ammunition and boxes of bombs. Only three of the fifty-nine who started got through, and though this does not mean that all the rest were

hit, some presumably deciding to take shelter in shell-holes, the figures do testify to the weight of fire which the Germans were laying on and over the London Scots' position. Two of the four company commanders were by then out of action, and, soon after 2 p.m., a third was killed. The burden of managing the defence now fell wholly upon the fourth, Captain Sparks. 'The better to direct the fighting, he was often seen standing and moving on the unbroken ground between the trenches' – conduct which would have attracted admiration at Waterloo and, when displayed on a First World War battlefield, beggars powers of eulogy. His men, though less exposed, were steadily being wounded or killed by bomb-blast or sniping shots, and though his garrison was occasionally reinforced by refugees from even harder pressed battalions on his left flank – the Rangers, Kensingtons and Queen Victoria's – it was dwindling in strength. The men who were left were running out of ammunition fast and, like defenders of some imperial fortlet on the veldt or the Frontier, kept their rifles going throughout the hot afternoon with rounds extracted from the pouches of the casualties. By 4 p.m. Captain Sparks recognized that his tiny force, now under attack by thirteen German infantry companies from three different regiments, was about to go under. He sent the following message back across no-man's-land: 'I am faced with this position. I have collected all bombs and [cartridges] from casualties. Every one has been used. I am faced with three alternatives: (a) to stay here with such of my men as are alive and be killed. (b) to surrender to the enemy (c) to withdraw such of my men as I can. Either of these first two alternatives is distasteful to me. I propose to adopt the latter.' Using discarded German rifles and ammunition, he and four N.C.O.s made a final stand in the German front trench while the other survivors escaped into no-man's-land. There most of them, including Sparks, hid until darkness fell and allowed them to regain the British lines. During the day, the London Scottish, which had numbered 856 at dawn, had been reduced by death or wounds to 266.

The View from across No-man's-land

Such was one result, duplicated at thirty of forty other points up and down the Somme battlefront on the evening of 1 July, of trusting in the power of contemporary artillery to destroy an enemy position and 'shoot the infantry through' its ruins. The four forms of failure just examined do not exhaust the list of mishaps consequent on such an undertaking. The Ulster Division failed to carry its final objective, after a very rapid advance to its first, because the British barrage actually held it up, so allowing the Germans time to man with reinforcements brought from the rear positions which the Ulstermen would otherwise have found empty. Understandably, therefore, the Ulster Division counted 1 July a victory and the date, which also happens to coincide with the anniversary of the Battle of the Boyne (Old Style), is observed by the Protestants of the province as one of their holy days. Again, some battalions' attacks failed because their supports could not or would not follow the trail they had blazed into the German positions, so leaving them cut off deep within the enemy lines. This seems to have been the fate of some of the 12th York and Lancasters, whose graves were found on 13 November, at the very end of the battle, when the village of Serre, one of the uncaptured first-day objectives, at last fell into British hands. Many battalions of the second wave failed to make their attacks work because, arriving in the German trenches, they became so intermingled with the survivors of a battalion which had gone over before them that they lost order and cohesion themselves. But some battalions, one should not forget, succeeded. The 7th Division took some, the 18th most, the 30th all its first objectives, and battalions of the 21st and 34th secured sizable sections of the German trenches opposite their own. The French, better-trained, more experienced, and with much more heavy artillery, had taken all their first-day objectives, and would have gone on if the plan had provided for unexpected success. The first day of the Somme had not been a complete military failure.

But it had been a human tragedy. The Germans, with about sixty battalions on the British Somme front, though about forty in the line, say about 35,000 soldiers, had had killed or wounded about 6,000. Bad enough; but it was in the enormous disparity between their losses and the British that the weight of the tragedy lies: the German 180th Regiment lost 280 men on 1 July out of about 3,000; attacking it, the British had lost 5,121 out of 12,000. In all the British had lost about 60,000, of whom 21,000 had been killed, most in the first hour of the attack, perhaps the first minutes. 'The trenches,' wrote Robert Kee fifty years later, 'were the concentration camps of the First World War'; and though the analogy is what an academic reviewer would call unhistorical, there *is* something Treblinka-like about almost all accounts of 1 July, about those long docile lines of young men, shoddily uniformed, heavily burdened, numbered about their necks, plodding forward across a featureless landscape to their own extermination inside the barbed wire. Accounts of the Somme produce in readers and audiences much the same range of emotions as do descriptions of the running of Auschwitz – guilty fascination, incredulity, horror, disgust, pity and anger – and not only from the pacific and tender-hearted; not only from the military historian, on whom, as he recounts the extinction of this brave effort or that, falls an awful lethargy, his typewriter keys tapping leadenly on the paper to drive the lines of print, like the waves of a Kitchener battalion failing to take its objective, more and more slowly towards the foot of the page; but also from professional soldiers. Anger is the response which the story of the Somme most commonly evokes among professionals. Why did the commanders not do something about it? Why did they let the attack go on? Why did they not stop one battalion following in the wake of another to join it in death?

Some battalions were stopped. On the northern face of the Gommecourt salient, where the 46th North Midland Division's attack had failed completely with heavy loss in the morning, one of the brigade commanders, Brigadier-General H. B. Williams, who had seen the 1/6th North Staffordshire and 1/6th South Staffordshire massacred shortly after zero, declined to

send forward their sister battalions, the 1/5th North Staffords and the 1/5th South Staffords, later in the afternoon. The whole of the 10th and 12th Brigades, in 4th Division, were held back from a pointless renewal of the attack north of Beaumont Hamel about the same time, and in the evening General de Lisle, commanding the 29th Division, countermanded orders for the 1/4th and 1/5th King's Own Yorkshire Light Infantry, which had been brought forward from X Corps' reserve, to make a further attempt on the corpse-strewn slopes of Thiepval. There were other reprieves, but the majority of battalions scheduled to attack did so, no matter what had happened to those which had preceded them. There are a number of ways of explaining why this should have been so. Normal military sense of commitment to a plan was one reason, the spirit of contemporary generalship, schooled to believe in the inevitability of heavy casualties, another, the mood of self-sacrifice which had the Kitchener armies in its grip a third. But most important of all was the simple ignorance of what was happening which prevailed almost everywhere on the British side of no-man's-land throughout most of the day.

Even sixty years later, it is very difficult to discover much that is precise, detailed and human about the fate of a great number of the battalions of the Fourth Army on 1 July. Many of the London Territorial regiments, with a strong and long-established sense of identity, a middle-class character, and personal connections with metropolitan journalism and publishing, produced after the war excellent regimental histories in which the official chronicle is supplemented and illuminated by a great deal of personal reminiscence from literate and articulate survivors. The regular battalions of the Guards and the regiments of the line added copiously to their existing histories. But, as we have seen, the Somme was predominantly a battle of humbler and more transient groups than these, over which the regular army had temporarily cast the cloak of its identity, but which at the peace vanished from public memory almost as quickly as they had been conjured into existence. It was not a deliberate act of obscuration. The regular regiments which had raised the greatest number of 'Service' battalions were often the

least affluent (the rough rule of thumb in calculating the social status of an English regiment is that the farther from London its depot, the less fashionable it will be, and the less monied its officers) and the least able therefore to stand the expense of printing a really exhaustive history. There was moreover a difficulty about sources. The principal source of a unit's history is the War Diary, which the intelligence officer is supposed to write up daily. When he is an amateur its contents tend always to be sketchy, and when action is intense and casualties heavy it may run for days in arrears, later to be written up for form's sake from a single, sometimes second-hand, memory of events. All these caveats apply to the War Diaries of 1 July. Consequent uncertainty about the experience of particular Kitchener battalions has added an extra poignancy to their collective story. The uncertainties might have remained forever undispersed. At the very last moment, however, a Lincolnshire farmer, Martin Middlebrook, in whom a chance visit to the war cemeteries of the Somme in the late nineteen-sixties aroused an obsessive curiosity about the nature and fate of the Kitchener armies, embarked on a quest to discover survivors of 1 July, and in a truly heroic effort of historical fieldwork, found and interviewed 546 of them, by then, with the exception of a few enlisted under age, men of seventy or over.

The book which he made from his interviews is a remarkable achievement, comparable with Siborne's history of Waterloo, constructed on the same basis, and certainly fit to stand beside it, as well as being a great deal more readable.* But whereas Siborne addressed his inquiries to all surviving officers, and from their replies was able to piece together a meaningful account of the battle, Middlebrook's answers came, of course, only from the junior ranks whose view was a very local one and which collectively depict almost indecipherable chaos. We have already seen what Siborne's correspondents had to say about the limitations which the circumstances of battle imposed on the grasp of the passage of events. What Middlebrook's evidence emphasizes is the extent to which 100 years of technological change had further reduced the range of effective vision on the

**The First Day on the Somme* by Martin Middlebrook.

battlefield, particularly in those not familiar with the realities of war. 'On my left,' wrote a private of the 1/8th Royal Warwicks, of the scene at zero hour, 'I could see large shell bursts as the West Yorks advanced and saw many men falling forward. I thought at first they were looking for nose-caps (a favourite souvenir) and it was some time before I realized they were hit.' On the far side of no-man's-land, 'I found the German wire well cut,' wrote a private of the 4th Tyneside Scottish, 'but only three of our company got past there. There was my lieutenant, a sergeant and myself. The rest seemed to have been hit in no-man's-land . . . the officer said, "God, God, where's the rest of the boys?"' Private Tomlinson, of the 1/7th Sherwood Foresters, accompanied his commanding officer across no-man's-land, who had gone to find out for himself what was happening to his battalion. 'When we got to the German wire I was absolutely amazed to see it intact, after what we had been told. The colonel and I took cover behind a small bank but after a bit the colonel raised himself on his hands and knees to see better. Immediately he was hit on the forehead by a single bullet.'

With a view of events so hard and dangerous to come by at close quarters with the enemy, it is to be taken for granted that in the British lines a composite picture of the battle was even more difficult to piece together. Rowland Feilding, a Coldstream Guardsman who had come up to observe the battle from a point opposite Mametz, wrote to his wife, 'the sight was inspiring and magnificent. From right to left, but particularly opposite the French . . . the whole horizon seemed to be on fire, the bursting shells blending with smoke from the burning villages . . . this is a district of long views. Never was there a field better suited for watching military operations.' But Feilding was there as a sight-seer, seeking sensation, not precise information. A sight-seer with a more professionally inquisitive motive, J. F. C. Fuller, found on arrival 'an intense bombardment . . . in full swing, and so much dust and smoke [covering] the Gommecourt salient that it was difficult to see anything clearly. At five minutes to zero a somewhat scattered smoke barrage was put down, then came the attack across no-man's-land. I cannot say that I saw it. All I can vouch for is that a little later on through

my glasses I did see several groups of men, presumably of the 139 Brigade, moving towards Pigeon Wood.' A commanding officer on the Gommecourt sector, almost under Fuller's eyes, Colonel Dickens, of Queen Victoria's Rifles, saw even less than he did: 'For two hours after zero, no news whatsoever was received from the front' (which was only about 1,000 yards distant) 'all communications, visual and telephonic having failed. Beyond answering appeals from the Brigade' (next headquarters upward) 'for information, we had leisure to observe what was going on.' But he learnt nothing until, after nine o'clock, he was visited by 'two plucky runners who [had] returned to our line through the barrage'.

Why should he have had to depend on runners? The reason is simple to explain. The communication system in Fourth Army, resembling in essentials that installed up and down the Western Front and on both sides of no-man's-land, was a comprehensive one. It was based on the telephone and the telegraph, the latter replacing the former where amplification was difficult to ensure, and ran through an extremely elaborate network of 'land line' and 'air line'. Air lines from the major headquarters – G.H.Q. at Montreuil and Fourth Army H.Q. at Querrieux, fifteen miles from the front – to Corps, and Division, with as much lateral branching as was necessary to make communication to a flank possible. Forward of Division, to Brigade and Battalion, the lines left their poles to descend earthwards, becoming 'land lines', by this stage of the war no longer strung vulnerably along the walls of the communication trenches, but buried under the duckboards on the floor. The nearer it approached the front trench, the deeper was it buried, until in the forward zone it reached a depth of six feet. The installation of this 'six-foot bury' had been one of the most time-consuming preparations for the offensive, but was justified by the security of communication it provided even under the heaviest enemy shellfire. It had, however, one disabling shortcoming: it stopped at the edge of no-man's-land. Once the troops left their trenches, as at 7.30 a.m. on 1 July, they passed beyond the carry of their signals system into the unknown. The army had provided them with some makeshifts to indicate

their position: rockets, tin triangles sewn to the backs of their packs as air recognition symbols, lamps and flags, and some one-way signalling expedients, Morse shutters, semaphore flags and carrier pigeons; but none were to prove of real use on 1 July. Indeed, these items seem only to have further encumbered men already heavily laden, in a fashion more reminiscent of explorers setting off on an expedition than soldiers entering battle. The story of Scott's Last Expedition, news of which had magnetized the English-speaking world on the eve of the war, may have seemed, as it does in retrospect, of special significance to a reflective soldier of the Fourth Army as, bowed under the weight of rations and protective clothing, he prepared to leave base-camp for the dash to the final objective on the evening of 30 June; it has parallels in the fate of the vanished party of the 12th York and Lancasters, whose bodies were discovered five months after the attack in the heart of the German position.

That a party could disappear so completely, not in the Antarctic wastes but at a point almost within visual range of their own lines, seems incomprehensible today, so attuned are we to thinking of wireless providing instant communication across the battlefield. But the cloud of unknowing which descended on a First World War battlefield at zero hour was accepted as one of its hazards by contemporary generals. Since the middle of the nineteenth century, the width of battlefields had been extending so rapidly that no general could hope to be present, as Wellington had made himself, at each successive point of crisis; since the end of the century the range and volume of small-arms fire had been increasing to such an extent that no general could hope to survey, as Wellington had done, the line of battle from the front rank. The main work of the general, it had been accepted, had now to be done in his office, before the battle began; and indeed one of the pieces of military literature most talked of in the British army before the First World War was a short story, *A Sense of Proportion*, by General Sir Edward Swinton, which had as its central character a general – obviously based on the great Moltke – who, having made his dispositions on the eve of battle, spends its hours casting flies for trout, serene in the

assurance – which the story's conclusion vindicates – that he had done all he could.

No British general spent 1 July fishing. But the spirit which informs the plans laid by the Fourth Army, whether those of a formation like XIII Corps (equivalent in size to Wellington's Waterloo army) which ran to thirty-one pages (Wellington issued no written plan for Waterloo), or a unit like Queen Victoria's Rifles, a force of under 1,000 men, which ran to twenty numbered paragraphs, is essentially Swintonian. It is a spirit not of providing for eventualities, but rather of attempting to preordain the future; a spirit borne out by the language of the orders: 'infantry and machine-guns will be pushed forward at once ...'; 'the siege and heavy artillery will be advanced ...' 'After the capture of their final objective the 30th Division will be relieved by the 9th Division ...' Man's attempts at preordination are always risky and require as a minimum precondition for success the cooperation of all concerned. Upon that of the Germans the British could not of course count. Consequently, at every point where the future threatened to resist preordination, Haig and Rawlinson had reinsured themselves – by lengthening the duration of the bombardment, adding to the targets to be destroyed, increasing the ratio of troops to space.

The effect of these reinsurances was to complicate the plan. And the complication of a plan which would depend for its success on the smooth interaction of a very large number of mutually dependent elements invited its frustration. Interaction requires articulation, to adopt the language with which J. F. C. Fuller was fond of obscuring military truths; which means that if major operations are to be carried through in the teeth of enemy resistance, commanders must at all times be able to talk to their troops, troops to their supporting artillery and so on. Such conversations were easily arranged while everyone was on the same side of no-man's-land. But once the infantry departed on their journey, conversation stopped, to be carried on, if at all, through the medium of the battalion runners, upon whose messages Colonel Dickens, for example, had to rely for news, two hours old, of the progress of his fighting companies.

Discontinuities of this order in the receipt of information, particularly when the information concerned difficulties or failure, made the management of a battle, in the tactile and instantaneous fashion open to Wellington at Waterloo, impossible. Commanders could not discover where the soldiers were: 'Observation of troops, on account of the smoke and dust, was extremely difficult, and although two contact patrol aeroplanes displayed amazing daring, flying along the front sometimes only fifty feet above the troops under heavy small-arms fire, no definite information could be obtained' (of the 4th Division in midmorning); hard-pressed battalions could not ask their supporting batteries for fire support: the 14th Brigade, pinned down by heavy machine-gun fire from Thiepval at 8.45 a.m., could not get the promise of a barrage until 12.05 p.m.; carefully rehearsed soldiers failed to cooperate in changes of plan which events made necessary: 'a party (of the 56th Division) told off to carry concertina wire could not for some time be got to understand that they must drop their loads and help to form an attacking wave.' Throughout the morning and afternoon, Rawlinson, at Querrieux, and Haig, in his advanced headquarters at the Château de Beauquesne, ten miles to the north, attempted to follow the battle from scraps of imprecise information several hours old. Neither made real sense of it. Neither, very wisely, ordered any substantive changes of plan. Many of the gunners, whose fire, if properly directed, would have been so effective in saving British lives, also remained, though closer at hand, inactive spectators: 'On the whole,' wrote Neil Fraser Tytler of a Lancashire Territorial Field Brigade, 'we had a very delightful day, with nothing to do except send numerous reports through to Head Quarters and observe the stupendous spectacle before us. There was nothing to do as regards controlling my battery's fire, as the barrage orders had all been prepared beforehand.' Throughout this period, the only group of soldiers with precise information to offer of the whereabouts and circumstances of their units were the battalion runners. It is ironic to reflect that

The Will to Combat

The late-twentieth-century soldier does not expect to be left to die of his wounds on the battlefield. For the reduction of delay in evacuating the wounded soldiers from the point of injury to the point of first aid in the period since 1918 has been striking, and represents easily the most important of the many advances achieved in modern military medicine. In Western armies during the Second World War, the delay between suffering injury and arriving at the aid post was commonly reduced to under an

**A Life of One's Own* by Gerald Brenan (Eyre & Spottiswoode. 1962).

hour; in Vietnam, where 'casualty evacuation' helicopter pilots were trained to land in the fire-zone and under fire, it averaged fifteen minutes – rather less than the victim of a civilian traffic accident might spend in an ambulance. The patient moreover can now be transfused in the helicopter and landed at a hospital offering a complete range of resuscitation facilities and expert surgery in a variety of specialities. Today the victim is unlucky who, escaping death outright, succumbs to the effects of his wounds.

The early-twentieth-century soldier already perceived the hope of life which the novel combination of expert surgery, anaesthetics and asepsis offered if he should be hit; but it was a perception less immediate than that which he had of the dangers, enormously magnified since Waterloo, of the battlefield on which he had to move and of the gravity, equally magnified, of the sort of wound he could suffer on it. What, given these perceptions, was it which impelled him to leave cover, advance and engage in combat in such circumstances?

Not everyone, even at high moments of the war, was prepared to do so. On the eve of the Somme, quintessentially a high moment, a number of soldiers inflicted wounds on themselves to avoid having to 'jump the parapet'.* At low moments of the war, of which the later stages of the Third Battle of Ypres ('Passchendaele') yielded many, some British battalions realistically accepted that some men would not or could not stand the strain of action and excused them from duty: 'to gratify a mawkish humanitarianism,' wrote the excessively tough-minded

*Is the self-inflicted wound ('S.I.W.') a phenomenon produced by the First World War, risked despite the legal penalty attached because of recent advances in medicine? Nineteenth-century Russian serfs had been given to knocking out their front teeth, with which soldiers bit the old musket cartridge, so as to avoid conscription. But instances of self-wounding, before the development of antiseptics, have escaped me. Modern medicine has however made a wound inflicted by the enemy or by genuine accident – the latter at least five per cent of all woundings between 1914 and 1918 – a very desirable passport off the battlefield: 'a comfortable wound,' wrote Maurice Bowra, 'was an act of God much to be welcomed'; 'to them a wound,' wrote Hanbury-Sparrow of his soldiers, 'no matter how slight, terminates all moral obligation to go on'; 'When the whistle blew,' recalled F. W. A. Turner of his jump-off on 1 July, 'the first man up my ladder was an American, Private Martin. As soon as he reached the top he was shot through the wrist. He came straight back. "I've got mine," he said, "I'm off."'

medical officer of the 2nd Royal Welch Fusiliers on 15 October 1917, 'two or three score mean fellows are encouraged to slip away every time there is risk to their skins, so more and more average men learn to shirk with impunity, attacks fail, and losses run into untold thousands, because the most dutiful of our men are not backed up.' And, taking a very broad view of the war, a point was reached in every army at which either a majority or a disabling minority refused to go on. This point was reached by the French army in May 1917, when 'collective indiscipline' occurred in 54 of the 100 divisions on the Western Front; in the Russian Army in July 1917, when it failed to resist the German counter-attack consequent on the collapse of the 'Kerensky Offensive'; in the Italian army in November 1917, when the Second Army disintegrated under German–Austrian attack at Caporetto. In March 1918, the British Fifth Army collapsed, as much morally as physically, and in October the German army in the west signified to its officers its unwillingness to continue fighting. In each case, excepting Germany's, and if we count the battle of Loos in September 1915 as Britain's introduction to heavy losses, the moment of collapse occurred between two years six months and two years eleven months after the outbreak. However, it is probably not the lapse of time which is significant, but the relationship of total casualties to the number of fighting troops engaged; a rough calculation, and anything better than a rough calculation is difficult with such notoriously unreliable statistics as casualty figures, suggests that the break came soon after the total number of deaths suffered equalled the number of fighting infantry in the divisions. Counting the fighting infantry of a division at 10,000, and the number of British, French, Italian and Russian divisions engaged against the central powers as 60, 110, 45 and 120, we get figures of 600,000, 1,100,000, 450,000 and 1,200,000 which are more or less the totals of deaths suffered by each combatant power at the moment its army underwent collapse or crisis. The German army, which certainly suffered a great many more deaths before cracking, escapes from the pattern; but it is important to recall that, almost until the end of the war, it had been fed on a diet of victory: in 1914 Tannenberg, in 1915 Gorlice-Tarnów, in

1916 the defeat of Romania, in 1917 Caporetto and the Russian armistice, in 1918 a succession of breakthroughs of the British and French fronts.

Broad views of this sort tell us nothing, however, about what did (or did not) motivate the soldier to fight in a specific combat situation in trench warfare. We have seen that on the Somme, on 1 July, there were special factors at work which were implicit in the composition and experience – or inexperience – of the Fourth Army. But over and above its cohesion, sense of mission, mood of self-sacrifice, local as well as national patriotism, there were other elements in play. Self-confidence and credulity were certainly present, and powerfully effective at persuading the Pals to jump the parapet. But to emphasize the populist character of the Kitchener armies is to minimize the importance which leadership played in taking it into battle. And arguments can be found to suggest that leadership – conscious, principled, exemplary – was of higher quality and greater military significance in the First World War, at least in the British army, than before or since.

The 'Lost Generation' and the 'Public School Officer' are clichés which seem too well-worn to be worth repeating or re-examining in this context. Certainly by the end of the war, the officers of the British Expeditionary Force had ceased to be a socially exclusive group, indeed were perhaps more broadly recruited than their equivalents in the Second World War. For the British army of 1939–45 put officer selection on to a scientific basis, making all applicants for commissions submit to tests of their intelligence, stability, companionability, leadership potential and the like, considerations which favoured the middle-class over the working-class candidate. The officer casualty rate of the First World War would have made such a system unworkable, even if it had been thought of, and as the campaign on the Western Front dragged on it became the practice to promote direct from the ranks on a commanding officer's recommendation. Thus men whose only qualification for a commission was that they had proved themselves good soldiers, and who would in peacetime have had no chance, or thought, of becoming officers, found themselves suddenly lieutenants, later captains,

majors, or even lieutenant-colonels. In the longer term, this wholesale conferment of officer-status (avoided in the German army by recourse to such expedients as the creation of 'deputy officers' and 'sergeant-major-lieutenants') on lower-middle and upper working-class youth was to have a highly beneficial effect on the English class-system. The immediate difficulty remained, nevertheless, and it was one which each new officer had to face, of finding and adopting a personal style to match the rank which chance had thrust upon him.

The demeanour of the regular officer ought to have provided the temporary ('temporary gentleman' was the unkind wartime gibe) with an ideal type. But the regular officers disliked serving in the Kitchener battalions. ('The inspection proceeded. The General found that many of the men came out in August 1914. He was at home with these – he had just come from inspecting the 20th Royal Fusiliers [a Kitchener battalion]. He chatted and chaffed, pinched their arms and ears, asked how many children they had, and if they could be doing with leave to get another. As he passed from one 1914 man to another he dug his elbows into the Commanding Officer's ribs and exclaimed, "You're a lucky fellow." When it was over he said ... "That's been a treat. That's the sort we've known for thirty years."'*) Most Kitchener battalions knew as regular officers only the colonel and the adjutant. What served to ensure, in the remarkable way that happened, that new officers should resemble old was the decision to choose the first temporary officers, as R. C. Sherriff recalls from painful experience, from among public schoolboys, at a time when the regular British officer was a public school rather than a distinctively military type. This threatens to be a tautology, for the critics of the pre-1914 public schools commonly condemned them as militaristic. In a sense they were. But unlike the German military schools, which segregated the future officer from childhood and brought him up in a strictly military regime, the public schools educated the whole English upper-middle class and exposed it to a variety of influences, athletic, scholastic, ethical and religious as well as military. The eighteen-year-old who went on to the Royal

*From *The War the Infantry Knew*, Royal Welch Fusiliers.

Military College was treated when he arrived there as someone already formed in character and attitude and only needing tactical training to take his place in his regiment.

Thus it was that the amateur officers of the New Armies knew from the outset what was expected of them. And they knew too into what sort of institution the embryo regiment they had joined should grow. For the British regiment, with its complex and highly individual accretion of traditions, local affinities, annual rituals, inter-company rivalries, fierce autonomy and distinctive name – King's Shropshire Light Infantry, Loyal North Lancashire, Duke of Wellington's, Royal Fusiliers – was an extension, indeed a creation, of the Victorian public school system. Simply by being themselves, therefore, the first amateur officers provided their untrained soldiers both with an environment and a type of leadership almost identical to those found in a regular, peacetime regiment. They organized games for the men, and took part themselves, because that was the public school recipe for usefully occupying young males in their spare time. They organized competitions between platoons and companies – in cross-country running, rifle shooting, trench digging – because competition was the dynamic of public school life. They saw to the men's food, health, cleanliness, because as seniors they had been taught to do the same for junior boys. They administered automatically the military code of rewards and punishments, because it mirrored the system in which they had been brought up. And they took their men to church because it was there on Sundays that the school went *en masse*.

It is important not to exaggerate the piety of the public school officer of the New Armies. Some, like the most famous of them, Rupert Brooke, had become intellectual agnostics at the university. Some were indifferent or non-committal in a way which would have made them instantly at home in Wellington's army. Graham Greenwell, an eighteen-year-old Wykehamist whose diary is an important corrective to some 'Lost Generation' myths, seems to have lived a healthily pagan life for four years, sharing with Julian Grenfell, a regular officer, the view that, in the latter's words, 'War ... is like a big picnic without the objectlessness of a picnic,' before which he had 'never been

so well or so happy'. Grenfell was unlike Greenwell, however, in seeming actually to enjoy killing Germans, for which he had had a special sniping rifle made. Many of the amateur officers, and some of the regulars, in the early stages at least, shrank from killing. Greenwell describes the look-out he kept for the rare sight of a German and how, when at last he saw one within sniping range, he handed his rifle to a sergeant to do the deed. Hanbury-Sparrow, a regular officer, is more specific about his conscientious objection: 'You neither want to be killed nor to kill anybody. Officers, you feel, shouldn't engage in the rough-and-tumble – that's for the men; [yours] is the thinking part.' His objection is not therefore strictly ethical; but he did take an elevated view of what qualities an officer should possess:

> Were they or were they not braver? That was your criterion ... For the act of being brave compelled the utilization of the whole reserve of moral force that lay in a man ... every battalion had its own little core of officers around which the battalion clung. Wounds or sickness might get them but sure enough they'd return ... Revolving around this nucleus was an endless changeover of officers. Death claimed many, but of the survivors only the good gravitated towards the centre. The rest ... couldn't stick it, and amongst them almost invariably were the hard drinkers and persistent womanizers – the very men, in fact, whose conduct showed their lack of inner discipline. Here in the trenches your sins found you out.

This equation of courage with morality, a sort of heroic Puritanism, is distinctive of the public school approach to the First World War at least in the early stages – though Sparrow was not an orthodox Christian but a disciple of Rudolf Steiner. A Christian who articulated the approach in words which appear to express the feelings of many New Army officers was Donald Hankey, killed on the Somme in October 1916. The essays in which he had spoken for his generation were written for the *Spectator* over the signature 'A Student in Arms'. Perhaps the most significant of them for the modern reader is 'The Beloved Captain', in which he characterizes the ideal leader.

> He came in the early days ... tall, erect, smiling ... For a few days he just watched. Then he started work. He picked out some of the most awkward ones and ... marched them away by themselves ...

> His confidence was infectious ... His simplicity could not fail to be understood ... very soon the awkward squad found themselves awkward no longer ... The fact was that he had won his way into our affections. We loved him ... If anyone had a sore foot he would kneel down ... and look at it ... If a blister had to be lanced, he would very likely lance it himself ... There was something almost religious about this care for our feet. It seemed to have a touch of the Christ about it.

The point to which Hankey leads the reader, via a catalogue of the complete officer's virtues but with more art than these extracts convey, is the revelation of the beloved captain as Christ himself. 'We knew that we should lose him ... But how was the company to get on without him? To see him was to forget our personal anxieties and only to think of ... the regiment and honour.' He is killed. 'But he lives ... And we who knew him do not forget. [And] I think that those who went West have seen him. When they got to the other side I think they were met ... And as they knelt before that gracious pierced Figure, I reckon they saw nearby the Captain's smile. Anyway, in that faith let me die, if death should come to me.'

It seems unlikely that many officers would have admitted to sharing in its entirety Hankey's view of what an officer should be. Nevertheless, it appears to indicate the direction, at the beginning of the war, of their aspirations and, if that is so, it eases our understanding of why the thousands of the New Armies climbed so readily into no-man's-land on 1 July and trudged off behind their platoon leaders. But why, once there, they continued to advance and to contest ground with the enemy demands a different explanation, for, amid the conditions of the First World War battlefield, leadership of the close-order variety exercised at Waterloo was not possible. The men were deployed in 'extended order', so that many were too far from the officer to be under his physical control – no question of pushing or thumping the ranks into line on the Somme – while the noise level, higher still than at Waterloo, drowned the human voice at a few feet.

The hope of plunder as a motive may be discounted. Soldiers of 1914–18 could leave their money as credits with the pay-

master, while trinkets had declined in relative value, so that there was little for which life was worth risking to be found across no-man's-land. Compulsion, on the other hand, was as important an agent in impelling men into the fight as ever. Crozier describes dealing with some runaways of his battalion on the afternoon of the Ulster Division's fight for the Schwaben Redoubt:

> a strong rabble of tired, hungry and thirsty stragglers approach me from the east . . . 'Where are you going?' I ask. One says this, one another. They are . . . given a drink and hunted back to the fight. Another more formidable party cut across . . . They are damned if they are going to stay. . . A young sprinting subaltern heads them off. They push by him. He draws his revolver . . . They take no notice. He fires. Down drops a British soldier at his feet. The effect is instantaneous. They turn back . . .

Moreover each battalion told off men to act as 'battle police' – in Queen Victoria's Rifles their duties were 'to see that no stragglers are left in the trenches' and to send 'any so found . . . up to their companies' – and the topography of the First World War battlefield made the task of the battle police comparatively simple. For men anxious to avoid death would naturally seek to remain in the trench system which, like school corridors, were easily patrolled for truants.

Compulsion, however, is not the whole, nor even part, of the answer. That is best sought, perhaps, by looking at what it was that impelled the defenders, in this case the Germans, to fight. On their motivation the topography of the battlefield would also have exerted a powerful influence. For, as the British plan emphasized, and the Germans knew without being told, possession of the parapet of their front-line trench was to be decisive in determining who lived and who died (not that the plan put it like that). Should the British reach it first, they could kill the defenders, at no risk to themselves, by throwing grenades down the shafts of the dug-outs. The Germans might, of course, dissuade them by offering their surrender. But, questions of honour and fighting spirit apart, surrendering was a ticklish business in trench warfare. Prisoners had no inherent value, so that soldiers did not seek specially to take them. The onus fell

rather on the would-be prisoner to get his surrender accepted, something difficult to do when friend and enemy met so rarely face-to-face, when face-to-face encounters tended to provoke hair-trigger reactions, and when a pacific shout from a dark dug-out in a foreign language might be misinterpreted. Even if taken prisoner, the captive's safety was not assured. For prudence required that he be sent instantly across no-man's-land, where he risked stumbling into his own artillery's barrage, or being mistaken for an attacker by infantry of the second wave waiting in the opposite front line. Both these fates overtook German prisoners on 1 July. About eighty out of 300 unwounded Germans being sent back to the trenches of the 56th London Division opposite Gommecourt were killed at 9.30 a.m. by German shelling; later Crozier, commanding the 9th Royal Irish Rifles, realized that his reserves in the front line were firing at prisoners whom some of his wounded were escorting from the far side. At his command, they stopped, but reluctantly. '"After all," I heard a youngster say, "they are only Germans."'

It does not take very much more illustration than these instances provide to explain why it was that the Germans raked so ferociously the advancing British lines at zero hour on 1 July. There was, in a sense, nothing personal about it. To surrender was dishonourable and might be dangerous. To run away was impossible (for the Germans, of course, had their own battle police farther down the trenches). To kill the British was, therefore, a necessity – though the majority would have called it a duty and, to the British on the wrong side of the wire, it may have seemed that they found it a pleasure. Certainly, as we have seen, easy killing does seem to generate in human beings symptoms of pleasure, which the zoologist Hans Kruuk has tried to relate to the compulsive behaviour of certain predatory animals when they come upon groups of their prey which are unable to escape from them. There was, however, probably no vindictiveness in the shots which Germans, in many places, later aimed at the British wounded, lying outside their trenches, whenever they moved. The Germans, recently released from the imprisonment of a terrible bombardment, outnumbered, and just reprieved from the sentence of execution by grenade-blast

below ground, were tensed to shoot at anyone who by as much as a gesture threatened to renew the attack on their positions.

If this helps to explain the German 'will to combat', it helps to explain too what motivated the British to dispute with them possession of the front trench. But does it explain what prompted the infantry who got in to leave its shelter and press on to their next objective? Excitement, sense of duty, knowledge of the plan, previous rehearsal of their task would all have been a spur; so too would have been the re-imposition of leadership which possession of the trench made possible; many accounts describe how the officers moved along a captured trench to speak to their men, sort out disorganization, encourage, congratulate, exhort. But again, as with the Germans, mechanical and topographical factors were at work. An enemy front trench was a dangerous place; its defences were the wrong way round and it had no-man's-land, an area of intense hazard, behind it. To be counter-attacked in the front trench was to risk expulsion into the danger-zone one had just escaped – the enemy barrage-line or the killing area of his machine-guns. Safer, in many ways, to press on, particularly if one's own barrage, that explosive safety curtain, was still within reach and offered one safe passage to the next enemy trench. To reach that was to provide oneself with room to manoeuvre to one's rear, if events should subsequently force one to retreat; it was also to vacate a space for the supporting waves to occupy, which would come to one's assistance if the enemy should counter-attack. For how long such a comparatively complex set of perceptions would impel infantry to move forward into enemy territory is very difficult to estimate. These are really officers' perceptions. But the precariousness of life in the enemy's front trench would have been evident to most soldiers; once persuaded to move forward from it, it seems to have been possible to keep them on the go until enemy resistance or the onset of exhaustion forced them to ground. What happened then would have been determined by the rules of trench warfare examined earlier.