Presentations

Strategy and Intelligence in the First World War

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Geography and maps

'Many intelligence reports are contradictory; even more are false, and most are uncertain', Clausewitz wrote in *On War*. His conclusions reflected his own experience of the Napoleonic Wars, the last great European conflict before the First World War.[1] For Clausewitz, the exercise of strategy rested less on information than on insight, intuition and inspiration. The great commander, for his generation embodied in Napoleon Bonaparte, depended on what Clausewitz called *Geist*, a German word hard to translate precisely into English but which conveyed a mixture of intellectual and moral qualities particular to the individual.

That characterisation misses the science that underpinned Napoleon's exercise of command. His capacity for rapid manoeuvre ending in decisive battle was founded on his correct estimations of how long his armies would need to march between two points and which features – rivers, mountains or forests – would screen their movement. In other words, he conducted war in ways which optimised the relationship between time and space. For this he relied on geographical intelligence – on the work of cartographers, not spies or secret agents (although he used these too). Napoleon was an artillery officer, schooled to think scientifically by a military education that reflected the eighteenth-century Enlightenment. Jomini, the strategic theorist who proved far more influential in the development of military education before 1914 than did Clausewitz, recognised the point in ways that his contemporary was too ready to dismiss. Whereas *On War* used no maps, Jomini's works could not be understood without them.

Between the battle of Waterloo and the outbreak of the First World War, the most important form of intelligence for European armies, especially those engaged in wars of imperial conquest, remained geographical. Colonisation depended on naval charts and land surveys, and when armies pushed the frontiers of empire outwards they became *de facto* explorers. Charles Callwell, the principal British theorist of what he called 'small wars', an artillery officer like Napoleon who was posted to the War Office's Intelligence Division in 1887, saw topographical ignorance as the biggest challenge facing armies fighting outside Europe.[2]

That problem persisted after 1914 because the First World War was a global war. In its

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1 Carl von Clausewitz, *On War*, trans and ed by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), p. 117; for a fuller discussion, see David Kahn, 'Clausewitz and intelligence', in Michael Handel (ed), *Clausewitz in modern strategy* (London: Frank Cass, 1986).

2 Charles Callwell, *Small wars: their principles and practice* (London: HMSO, 1906), pp. 43-56; see also Daniel Whittingham, *Charles E. Callwell and the British way in warfare* (Cambridge: Cambridge University Press, 2020).

first winter a German mission, headed by Oskar Ritter von Niedermayer, set out from Ottoman territory to cross Persia and reach Afghanistan. Once it arrived in Kabul, its task was to whip up a holy war to undermine British rule in India. Unable to procure maps of Afghanistan from the German foreign office, Niedermayer had to copy pages from a general world atlas published in Britain.[3] By contrast in East Africa, a campaign which lasted for the full extent of the war, the British relied on German maps which proved 'far from accurate and in many places blank'. Despite their spurious place names, variable distances and failure to mark roads, the British trusted them because they 'were presented in a form which they associated with accuracy', so giving them a false sense of security.[4]

General staffs took much of this global knowledge for granted. On the outbreak of the war Callwell was recalled from retirement to become Director of Military Operations in the War Office in London. He had visited the Dardanelles before the war and in 1906 warned that forcing the straits would be difficult, that it could not be done by ships alone and that it would first require an amphibious landing to subdue the Ottomans' coastal defences. As the British Admiralty concocted a plan to knock Turkey out of the war by pushing an Anglo-French navy into the Black Sea, Callwell repeated his admonitions. When the Gallipoli campaign nonetheless went ahead, it failed not because the British lacked maps and charts of their proposed theatre of war but because they took too little account of the information they contained.[5]

A surfeit of intelligence had bred contempt – a belief that information had given those that possessed it mastery over the obstacles that lay in their path. In 1904, the founder of the geography school at Oxford University, Halford Mackinder, described the world as 'a closed political system'. It had been fully explored and fully politicised – in that its territories had all been allocated to states and their frontiers had been defined.[6] Ten years later the war plans of the belligerent powers rested on the same conclusion. Their general staffs were sufficiently well informed about the topography and lines of communication within their potential theatres of war to believe that they would be able to turn their plans into practice with even greater effectiveness than had Napoleon and to do so over even greater distances. They were deluded.

After Prussia's rapid victory over France in 1871, other powers followed Germany's example in establishing 'capital' general staffs, planning bodies set up to prepare for war in peacetime. General staffs created a market for intelligence. In the Napoleonic Wars, the functions of general staffs had been foreshadowed in part by Quartermaster General's departments whose job was to collate topographical information in order to prepare deployments and lines of march. When they lacked adequate maps, they tasked military engineers to survey ground for them. By contrast, general staffs of the early twentieth century

3 Renate Vogel, *Die Persien- und Afghanistanexpedition Oskar Ritter v. Niedermayers 1915/16* (Osnabrück, 1976), p.137.

4 Charles Hordern, *Military operations: East Africa*, vol 1 (no more published (London: HMSO, 1941), pp. v-vii.

5 Peter Chasseaud and Peter Doyle, *Grasping Gallipoli: terrain, maps and failure at the Dardanelles*, 1915 (Staplehurst: Spellmount, 2005).

6 Halford Mackinder, 'The geographical pivot of history', in *The Geographical Journal*, 4 (1904), pp. 421-44.

were large bureaucracies, employing hundreds of men, in an era in which most departments of central government remained small. They hoovered up the doctrinal publications of foreign armies, sent observers to study and report on others' wars, and appointed military and naval attachés to their states' overseas embassies. Espionage was a comparatively minor element in this process of information-gathering, much of which was conducted in plain sight. Both foreign ministries and ministries of the interior (concerned with the threat of revolution and anarchy) followed suit in becoming consumers of information.

From technical push to demand pull: signals intelligence and aerial observation

The First World War enabled this relationship between supply and demand to become fully established and so put the use of intelligence in war on a new footing. Technological innovation transformed intelligence collection and matched the demand pull from staffs and governments by providing information in bulk. Nor was it just a question of quantity; the intelligence was also of higher quality – timely enough to be actionable and important enough to be secret. From an over-reliance on relatively open sources, intelligence departments could prioritise information that was confidential or which their enemies did not want them to know. Intelligence departments were able to speak with a certainty and confidence that they had lacked (if they had even existed) in Clausewitz's time. Then cartography had only provided the broad contours of a campaign. The acquisition of tactical and time-sensitive intelligence had been rudimentary. A cavalry patrol would struggle to penetrate far into enemy positions and was in danger of revealing its own commander's intentions as it did so. Finding the enemy was even harder at sea: unpredictable and variable weather hid fleets as effectively as did the expanse of the oceans.

The first of two big changes in intelligence collection rested on the transformation of communications. The invention of the telegraph enabled the British government to speak to its army's headquarters during the latter stages of the Crimean War. Telegraph lines were secure provided the enemy could not tap into them. When the First World War broke out, the British brought the major undersea cables to the surface and routed them through their listening services, so giving them access to the international messages of both allies and foes. However, telegraph wires were of less utility for tactical command. Because they had to be laid in advance, they were inflexible; they could be cut by enemy patrols or shellfire; and they had no utility at sea.

At the beginning of the twentieth century Marconi's development of wireless telegraphy revolutionised the potential applications of intelligence in war. By transmitting directives through the ether, wireless conveyed a commander's intentions in a format which was publicly accessible and did so in real time. To minimise the dangers of interception, messages were relayed in code but the processes of enciphering and decoding themselves took time and so undercut the gains in speed. In 1914, during the last week of the July crisis which led to the outbreak of the First World War, governments could sometimes intercept each other's diplomatic traffic but still struggled to do so fast enough to get inside each other's decision-making loop. A signal sent from an ambassador to his head of state at home had to be enciphered, transmitted and then decoded before it arrived on the statesman's desk. In a fast-changing situation, the

statesman at home might be reacting to yesterday's events while his adversary might have learnt his ambassador's views through intercepts at least as quickly as he did.

When the war broke out, tactical intelligence was frequently too time-sensitive to permit the delays which encipherment and decoding imposed. As armies manoeuvred across Europe in August 1914, the need for speed could trump the requirement for security in the transmission of information and intentions. Units, most notoriously within the Russian 2nd Army in its invasion of East Prussia, spoke to each other in clear, so providing the enemy with real-time intelligence that in this case contributed to the Russians' defeat at Tannenberg. But the Russians were not alone. Other armies also sent messages in clear and did so with relative impunity. They hoped that, even with this advantage, the enemy would be too late in his responses. Ciphers in any case did not provide full security: any wireless traffic indicated both enemy activity, especially when it increased in quantity, and his proximity, as its volume intensified. The only perfect way to avoid detection was to observe radio silence but that in turn incurred penalties.

The second big change in intelligence collection also occurred in the air. The development of the aircraft and balloon enabled observation to a territorial depth and width not open to cavalry, provided the weather remained favourable. In August 1914 aerial reconnaissance monitored the moves of the German armies invading Belgium and France. The timing of the French counter-attack on the Marne on 6 September was a direct consequence of intelligence acquired by aerial observation. As the war progressed aerial photography supplemented and increasingly replaced the personal reports of pilots. Images captured on successive days could plot changes in enemy positions, the location and size of supply dumps, and the construction of new lines of communication. Reconnaissance aircraft also became fighters as they engaged the enemy to establish dominance of the air so that they could better observe what was happening on the ground. As a result, armies had to change their habits. They moved under cover of darkness, especially when resupplying their front lines, or planned offensives for the shorter days of winter when light levels were low, as the Germans did at Verdun in January and February 1916.

The strategic consequences of military intelligence

By the end of 1914 it was clear that topographical intelligence had ultimately favoured defence over offence on every front, even if the Germans had made significant inroads into Belgium and France and the Russians into Austria-Hungary. Armies manoeuvred better on terrain they knew from pre-war exercises than from maps alone, and the railways along whose lines the telegraph lines ran enabled them to concentrate forces more quickly to thwart invaders. During the course of the war's first winter the battle fronts stabilised. Increasingly strong defensive positions, especially in the west, meant that tactics trumped strategy as commanders sought unsuccessfully to break through in order to restore mobility to the battlefield.

Both signals intelligence and aerial reconnaissance had reduced the element of surprise in warfare. Close to the front, the enemy could listen in on telephone conversations, and both increased wireless traffic and unusual levels of silence could give warning that an attack was imminent. The evidence gathered by aerial observation of new artillery batteries being put into

position or of the construction of jumping off points in front-line trenches pointed to the same conclusion.

The most important product of tactical intelligence for the strategy of land war was the ability to build up an accurate picture of the enemy's order of battle. By following shifts between and within fronts, intelligence services could indicate possible enemy command intentions – and especially major offensives, the fronts on which they would be launched and their direction. Night-time raids across no man's land identified the enemy units opposite. Networks of agents watching railways behind enemy lines plotted when these units moved and where they next appeared. They could send up aerial patrols to corroborate or deny their conclusions. The overall effect was to enhance the ability of defence to anticipate attacks and so reinforce the deadlock.

For the Entente armies monitoring those of the Central Powers, the most important result of this information was the ability to work out the balance of German forces between the western and eastern fronts. From the middle of the war, the Entente pooled its intelligence in a weekly summary. Both Douglas Haig and Philippe Pétain, respectively commanders of the British and French armies on the western front, proved extraordinarily sensitive to this information in their exercise of operational command. As they oscillated almost week by week between wearing-out battles of attrition and the possibility of either side achieving a breakthrough, they reflected the latest intelligence on enemy troop strengths and their distribution.[7] In spring 1918 they knew that Germany would attack in the west but could not yet pin down on which sector the offensive would fall. Conscious of how much they did know, the lack of information in response to this key question (a reflection in turn of the ambiguity in the minds of the German high command) proved a major source of tension between them – itself an indication of how reliant command had become on intelligence inputs.

The strategic consequences of naval intelligence

The development of this process in land warfare was incremental; at sea it was almost instantaneous. Wireless sets were heavy and in 1914 needed horse-drawn wagons to move them. In other words, their use on land was confined to higher commands and they were not of much value for reporting tactical intelligence. These constraints did not apply at sea. Warships could carry wireless and, when in action, could speak to each other in clear rather than in cipher in order to get real-time effectiveness. Some commanders in battle continued to use flags to signal to other ships in order to maintain radio silence but, as David Beatty, who commanded the British battle cruisers at the battles of Dogger Bank in 1915 and Jutland in 1916, found out, smoke and weather could obscure the visibility required to read his instructions.

The Germans were much more voluble in their readiness to speak to each other over the air, even doing so when their ships were lying alongside each other in port. They also employed a near-global (it did not reach western South America and the eastern Pacific) network centred on Nauen to maintain communications with their overseas missions, colonies and ocean-going

7 Jim Beach, *Haig's intelligence: GHQ and the German army 1916-1918* (Cambridge: Cambridge University Press, 2013).

vessels. By the end of November 1914 Britain had secured all three of the principal German code books used for naval and diplomatic purposes. It set up a naval intelligence division, known as Room 40 from its location in the Admiralty, to decode and analyse the messages which they picked up from their listening stations on the North Sea coast.[8] As a result, the Admiralty knew when German ships were putting to sea but on 31 May 1916, when the German High Seas Fleet came out, it did not relay raw intelligence to the commander of the British Grand Fleet once it too had put to sea for fear of compromising its source. That included evidence of the High Seas Fleet's order to return to port and the course which it would follow. Jellicoe missed his chance to intercept it as a result.

The Admiralty need not have worried. The Germans were not intercepting and decoding British signals on a regular basis – and remained unaware that the British were reading theirs. In 1915 SMS *Königsberg*, a German light cruiser blockaded by British ships in the Rufiji delta in East Africa, thought its signals were being read but its warning was not taken seriously, despite the fact that in March 1916 a blockade-runner which observed radio silence managed to deliver supplies to the German forces in East Africa, when one that did not failed. The High Seas Fleet attributed its encounter with the Grand Fleet at Jutland to bad luck, not to poor wireless discipline.

Intelligence enabled interception and intercepts enabled battle. Enemy forces, especially in northern waters and in the major oceans, would never have found each other without signals intelligence. However, battle at sea was not decisive in itself. Economic war became the principal form of offence and was crucially dependent on not just tactical but also economic intelligence. Here the challenges of collection were far greater. As on land the benefits were gradual and depended on the accumulation of large amounts of what could seem to be minor information to establish from scratch a picture of global trade and its adaptation to wartime circumstances. The fact that the City of London was the world's hub for insurance, shipping and banking helped, but the knowledge was scattered across different interests and departments. Germany adapted to the blockade by importing via border neutrals and consigning goods to intermediaries in the Baltic states, the Netherlands and Switzerland. As a result, diplomatic intercepts of communications between neutral powers and their embassies and commercial representatives overseas became crucial to the effective control of German imports. While Britain took responsibility for economic warfare at sea, France exercised it on land. Germany retaliated by attacking the Entente's trade routes but its calculations when it launched unrestricted submarine warfare in February 1917 rested on inadequate intelligence and unwarranted assumptions about how much they had to achieve to strangle allied trade.

The search for allies

Diplomatic intelligence served another highly important purpose in the war. After the outbreak of war, both sides sought allies in order to swing the balance of forces in their favour – especially in the Balkans and the Mediterranean. The biggest prize in this struggle was the United States.

8 Patrick Beesly, *Room 40: British naval intelligence* (Oxford: Oxford University Press, 1982) is the pioneering work on the subject.

Effective diplomacy in a competitive environment depended on accurate information. So too did propaganda. A shared language and a common political heritage gave Britain a head start in its efforts to manipulate opinion in America. While American opinion, broadly speaking was supportive of the Entente, it remained stubbornly reluctant to commit itself to the war until the threat to the United States's own security became palpable. This came in the form of the Zimmermann telegram, sent by the German foreign ministry to Mexico and offering territorial gains in the southern United States if it sided with Germany in the event of an American declaration of war. Room 40 intercepted the telegram but delayed its publication both to protect its sources and to maximize its impact. The US entered the First World War for several reasons in April 1917 but the impact of the Zimmerman telegram ensured that it was more united in its resolve than had seen possible only weeks before. The US commitment to the Entente also meant that it had the economic resources and in due course the manpower to win the war in the long term.

Propaganda

Both at the time and after the war American isolationists argued that they had been duped into the war by British propaganda. They were right in that Britain sough to manipulate and influence American public opinion both before the US entry to the war and after it. Sir William Wiseman, who headed the British intelligence organisation in the United States from late 1915, secured better access to the US government than did the British ambassador, and established cordial relations with Edward House, the confidant of the president, Woodrow Wilson, and in due course with the president himself.[9] Even while the US remained neutral, German intelligence services found themselves cut out and fell back on sabotage on the east coast as they sought to disrupt allied trade and on the west coast the manipulation of Indian exiles seeking independence. Britain's leverage was altogether more subtle, seeking influence over subversion. Their targets were opinion formers and especially newspaper editors.

The belligerents of 1914 came for the most part from societies with high levels of literacy, compulsory primary education and developed systems of higher education. Most of their populations had access to a flourishing, popular and mass-circulation press. When the war broke out newspapers provided an enormous open-source resource. At first governments struggled to impose censorship. In France newspapers appeared with blank columns, so making the work of the censor palpable.[10] The authorities responded by filling the gaps their controls were creating. Effective propaganda worked best if it were true, even if it was selective. It therefore depended on good intelligence, especially when – as it did in the early days of the war, it focused on neutral opinion. But as the war lengthened, exhaustion challenged domestic morale, a point made immediate by the two Russian revolutions of 1917. Now each state focused on shoring up the resolve of its own population while attacking that of the enemy.

The British Foreign Office Confidential Print, compiled and circulated around

9 Keith Jeffery, *MI6: the history of the Secret Intelligence Service 1909-1949* (London: Bloomsbury, 2010), pp. 110-120.

10 Jean-Jacques Becker, *The Great War and the French People* (Leamington Spa: Berg, 1985), pp. 29-48.

government departments on a weekly basis, rested overwhelmingly on selected newspaper reports which were openly and freely available in their country of origin. In Germany, the Prussian law of siege of 1851 meant that in time of war martial law was exercised by the deputy commanding generals of the corps districts. Some might be draconian in their censorship but others were not, and in any case most countries found there were too many newspapers for it to be possible to monitor them all effectively, especially if they were local publications. An Australian woman who remained in Leipzig throughout the war, Caroline Ethel Cooper, was still able to read *Daily Telegraph* from London and the *Neue Zeitung* from neutral Zurich in November 1917 and only complained of an absence of foreign newspapers in August 1918.[11]

Peace negotiations

The United States offered itself as a peace broker from the war's outset and Wilson sent House on two missions to Europe, in 1915 and 1916. He based himself in London and clearly found negotiation with Britain more congenial than with Germany or even France. However, although Sir Edward Grey, the British foreign secretary, kept House's hopes of success alive, Britain, France and Russia had agreed in September 1914 that none of them would make a separate peace. Despite enormous pressure from Germany, Russia honoured its undertaking until March 1918, when the Bolsheviks, who did not feel themselves bound by the commitments of their predecessors, accepted punishing terms at Brest-Litovsk.

The treaty of Brest-Litovsk revealed that, certainly for Germany and potentially for all the belligerents, negotiations during the war could be a means to divide an enemy alliance by persuading one of its members to make peace. Germany targeted Russia from the first winter of war and the Entente concentrated on Austria-Hungary in 1917-18. These efforts relied on accurate intelligence on the mood within the target state and an awareness of its war aims. In his memoirs Erich Ludendorff, the 1st Quartermaster General of the German high command, attributed Germany's defeat in the first instance to the disintegration of the quadruple alliance which Germany headed.[12] Beginning with Bulgaria in late September 1918, each of its members surrendered independently of its partners. The allies on the other side remained sufficiently united to ensure that the terms they set, up to and including the armistice with Germany on 11 November 1918, would enable them to continue to prosecute the war effectively in the event of there being no final peace treaty, The making of peace continued up until July 1923, when the new Turkish republic settled at Lausanne. Throughout these five years, the process of ending war depended on intelligence. Much of the signals intelligence was good but much of the human intelligence was not, as it rested too heavily on pre-war assumptions.

Legacy

After the war nobody was in doubt that intelligence had played a crucial role in its conduct and outcome; in its wooing of allies and in its manipulation of opinion as much as in its military and

11 Decie Denholm (ed), *Behind the lines: one woman's war 1914-1918: the letters of Caroline Ethel Cooper* (London: Jill Norman and Hobhouse, 1982), pp. 218, 272.

12 Eric Ludendorff, *My war memories 1914-1918* (2 vols, London: Hutchison, 2nd, 1920), vol 2, p. 679.

naval applications. Intelligence was central to the tactical and operational conduct of the war, but not as pivotal to the strategic direction of the war as it would become in the Second World War. Covert activity drove the manipulation of opinion and could develop into subversion but there is much less evidence of political decision-making being determined or even informed by up-to-date intelligence assessments. However, the underpinnings of Entente success in this regard, although not a secret as closely guarded as that of Ultra after the Second World War, remained largely unrecognised. Spy stories and espionage mythmaking flourished during and after the First World War. Although both sides used agents, their actual achievements were outstripped by the claims of post-war films and fiction. Mata Hari, the Dutch-born double-agent executed by the French in 1917, embodied the allure of the spy as *femme fatale*. This suited the intelligence services. Human intelligence was never likely to produce actionable information with the speed and in the quantity provided by signals intelligence, but that dependence could be covered by public self-deception and its appetite for fictional secret agents.