Original Paper

Reaping the Rewards of Co-Operation. Franco-British Intelligence Sharing during the Gas War, 1915-1918

Hanene Zoghlami^{1*}

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Abstract

Based on British and French archive material, this paper seeks to contribute to the limited "coalition warfare historiography" by exploring a neglected but revealing aspect of Franco-British chemical warfare between 1915-1918: Intelligence sharing. A contextual overview of the two allied intelligence services prior to and following the outbreak of war highlights their complementary strength and global reach. The tactical and strategic significance of French and British intelligence failures at the time of the first German poison gas attacks in April 1915 is examined and contrasted with subsequent allied experience. The discussion focuses upon the two most productive sources of allied intelligence information, mainly reports from secret agents and enemy prisoner of war interview digests. The volume, quality and detail of this material, and its importance to the Franco-British gas war effort are underlined. The article demonstrates how closely and effectively the two allies co-operated by exploiting their shared intelligence data to successfully anticipate German initiatives and to mitigate the searching battlefield challenge posed by an enemy whose technological superiority and resource advantages were evident especially during the earlier periods of the gas war on the Western Front.

Keywords

Franco-British, war, gas, chemical, allies, intelligence, co-operation, prisoners of war

1. Introduction

While 2014 saw the commemoration of the much vaunted centenary of the outbreak of the First World War, 2015 marks the one hundred anniversary of the introduction of modern chemical weapons on the battlefield. In April 1915, at the battle of Second Ypres the German army secured a tactical advantage when a large volume of compressed chlorine gas was released across the enemy lines against

¹ Department of English, Faculty of Human and Social Science, University of Tunis, Tunisia

^{*} Hanene Zoghlami, Department of English, Faculty of Human and Social Science, University of Tunis, Tunisia

unsuspecting and unprotected allied troops. Despite being almost entirely unprepared to conduct such a form of warfare, Britain and France hurriedly responded to the enemy challenge and retaliated in kind five months later at Loos and Champagne respectively, albeit from an inferior resource and technological position.

It is important to underline the scale and implication for the allies of this new and chilling initiative in modem industrialized warfare. During the gas war of 1915-1918 the French army alone deployed 11 tons of poison gas. For their parts the British and Commonwealth armies used 6,000 tons while the Germans expanded a far greater tonnage of gas against the allies than the combined Franco British totals. The chemical war added pressing new imperatives for closer cooperation between the two major western front allies, one area of which forms the subject of the present discussion: intelligence sharing.

2. Anglo-French Intelligence Sharing and Historians:

At the time of the outbreak of World War One all armies were aware that they could be, or were spied upon. In response they resorted to a number of ploys—such as dispersion of forces, camouflage and secrecy—to conceal information from the enemy. Intelligence became vital in the pursuit of tactical, operational and even strategic advantage. Yet, at the same time, it became more difficult to penetrate the barriers of secrecy and deception created by the enemy and thus piece together accurate intelligence evidence which would be available in time for commanders to exploit. After April 1915, following the shock of Second Ypres, the gas war added an additional and daunting headache for French and British military intelligence. Yet, surprisingly perhaps, there has been no focused examination in the literature of what became an important aspect of Franco-British co-operation in the great gas war.

As historians specializing in intelligence issues have emphasized the nature and scale of the First World War posed profound challenges to both the French and the British organizations. (Note 1) Institutional growth was a joint response to these challenges but in Britain there was a far greater degree of re-organization as well. (Note 2) Its Directorate of Military Intelligence eventually expanded into eleven sections and employed a staff which, by 1918, exceeded 6,000. (Note 3) It is also relevant to highlight the relative strengths and weaknesses of the two intelligence communities as France and Britain faced up to war with Germany in 1914.

In a recent monograph about British military intelligence in the First World War, Matthew Seligmann has discussed the implications of Britain's reorientation of her foreign policy in the early years of the twentieth century. Britain had previously regarded France and Russia as its most dangerous potential rivals while viewing Germany as a possible collaborator in containing a Franco-Russian threat. With Germany now identified by the British Foreign Office as the most destabilizing factor in the European balance of power, it was to France and Russia that Britain turned for support. (Note 4) Now that Germany was considered the new protagonist, much more detailed information was needed about its industrial and military capabilities and its strategic intentions. (Note 5) In particular, the British were anxious to know

more about the tactical precepts behind German fighting methods, the levels of training given to German soldiers, the specifications and performance levels of German equipment and a host of related matters. Unfortunately, very little survives in the British archives relating to the raw intelligence received by the War Office about pre-World War One Germany. Much of this information emanated from four major sources: reports of British officers travelling through Germany, reports produced by various (British) government departments, open source materials such as newspapers and finally, espionage. (Note 6) With the coming of war, with the exception of spying, these peace-time avenues of intelligence would largely disappear. But there was a fifth source: Britain's new *entente* partner. As Seligmann has argued: ...The French were another significant source of information about which the (British army) staff lectures and printed memoranda were discreetly silent. This belied their importance. (Note 7)

According to Seligmann the French were "extraordinarily successful" in obtaining confidential data about the German army thanks to the skill and professionalism of the French Second Bureau's clandestine intelligence coups. (Note 8) The problem for the British military intelligence community at the time was that they only received information that had been filtered by the French and based upon what they judged to be relevant. Even so, the British military authorities and their intelligence staff in particular received a significant amount of information from a diverse collection of French intelligence sources. (Note 9) Unfortunately, Seligmann did not extend his investigation into the area of shared intelligence and gas warfare.

An important recent addition to the specialist literature of British military intelligence in World War I is James Beach's doctoral thesis. (Note 10) Unlike earlier studies, this work examines the development of the intelligence system throughout the war with particular reference to the major source categories of intelligence information. Beach also assesses the organizational structures, leadership and composition of British military intelligence personnel to explain how the credibility and influence of their findings were shaped; while details are provided of the analytical techniques employed during the various stages of the intelligence gathering and interrogation process. (Note 11) Of particular relevance to the present discussion is Beach's investigation of the various British frontline sources of intelligence including captured German documents (and other materials) and information supplied by enemy prisoners.

Douglas Porch, in his study of the French secret services has maintained that while the First World War "revolutionized" French military intelligence, the service nevertheless entered the war with a number of assets. Their spying organization in Germany had a proven record of success, the fruits of which had been shared with their British allies. The French had also anticipated the importance of aircraft in the intelligence war, not just as the eyes of the army but for broader reconnaissance functions. (Note 12) Porch also stresses French recognition of the key role of what he calls "electronic" warfare, in particular telephone tapping and cipher decrypting. (Note 13) However, when the French intelligence services were tested at the time of the first German poison gas attack, they were clearly unable to alert the military high command of the impending tragedy. Unfortunately, Porch can throw no light on this matter largely

because he did not investigate the connection between the French intelligence services and their involvement in the gas war. And, apart from one minor reference, he did not discuss Franco-British co-operation in the gas war either.

Yet, if Beach, Seligmann, and Porch as specialist intelligence historians have not fully explored the role of French and British intelligence sharing during the gas war, nobody else has produced a closer study of the area. Indeed, many historians of the war on the Western Front do little more than gloss over French and British intelligence co-operation in general, let alone expand their analysis by connecting chemical warfare co-operation with the work of the allies' secret services.

3. Franco-British Intelligence Co-Operation on the Western Front

Allied intelligence gathering in the gas war occurred in two geographical levels. One involved the utilization of the French and the British global spying networks while the other saw the interchange of more local but detailed information between the two military intelligence services operating out or close to the western front. The specific major intelligence sources were reports from secret agents and information supplied by enemy prisoners of war. A fragment in Joffre's memoir about the First World War is suggestive of their importance:

Up until now, what we had were only hints about the attack. The first alarm was raised by prisoners on February 6 and February 7 1916 who confessed that important developments were taking place in the Damville region. Then secret information from an excellent agent reported that the Germans would attempt a big offensive in Verdun. Four days later, all this information was confirmed. (Note 14)

Franco-British gas intelligence co-operation began soon after the first German chemical weapon attack on April 22 1915. The French and British were given an eleventh hour opportunity to reduce potential casualties by responding to—what turned out to be—vital intelligence information supplied by German prisoners of the imminent use of poison gas. Neither of the allied intelligence services had anticipated this specific attack while the failure of the French and British senior command to authorize the appropriate precautionary measures, as urged by some local commanders, led to the tragic fiasco. The French and British paid a heavy human price for their mistakes at 2nd Ypres so it might seem highly probable that inquests dealing with intelligence and related operational issues would have been undertaken on both sides of the Channel to explain, among other things, what had happened and what went wrong. Whether any formal post mortems took place remains unclear, however, because there are no surviving documents in either the French military archives at Vincennes or the British National Archives at Kew which refer to the evaluation of allied intelligence failures at the time of the first German gas attack. Either way, Kipling's comment about a previous war, "we have ail had a jolly good lesson", would seem to sum up the aftermath of April 1915 for the allied military command in general and their intelligence services in particular. (Note 15)

What allied records do survive immediately following this episode concern urgent reciprocal requests from both armies for specific technical details of the German chemical attacks. As far as the line of communication was concerned, intelligence reports were often sent by the British War Office to the French Second Bureau in France; to General Huguet, the Chief of the French Military Mission attached to the British army, or to Colonel Vicomte de la Panouse at the French embassy in London. (Note 16) Across the Channel, in early May 1915, the French requested full details of the early German gas attacks on the British front. (Note 17) The swiftness of the British army's reply was highlighted in a letter, translated by the French army dated 6 May, which concerned information about the new asphyxiating gas used by the enemy against the British and Commonwealth armies. The gas release, the British confirmed, lasted twenty minutes and was strongly audible, being accompanied by a distinctive whistling noise. The gas cloud was also clearly visible in the daylight and the British troops, the report stated, reacted to it immediately. (Note 18) Throughout the remainder of 1915, the two allies requested and received information about enemy chemical attacks on their troops. Sometimes, highly detailed reports were enclosed with their letters such as that signed by the Under-Secretary of State for Artillery and Munitions, concerning the German gas attack on December 19 1915 against the British Second Army. (Note 19) Within their regular dispatch of reports, such as the one sent on October 8 1915 by the British army in the field to the French mission, are revealing intelligence details obtained from the interrogation of enemy prisoners. (Note 20) The role and significance of German prisoner of war information within the larger picture of allied intelligence sharing in the great gas war is worthy of special mention.

3.1 Prisoners of War and Allied Intelligence

Both the British and the French High Command appear to have identified prisoner interrogation as a vital avenue of intelligence information about the enemy's use of gas warfare. (Note 21) The evidence that remains provides a valuable insight into the range, detail and sensitivity of information that was communicated to the allied interrogators by German prisoners—as will be demonstrated by a selective, but representative examination.

What is immediately striking about this evidence is how willing so many German prisoners were, or appeared to be, about passing on information of the most sensitive military nature to their captors. A common theme in the British archive material throughout the entire period of the gas war concerns prisoners' estimates of the effects of British poison gas on German troops. (Note 22) The October 8 1915 report cited above contained information from prisoners who had participated in German gas attacks and who had experienced British use of chemical weapons between September 25 and October 2. This was probably the earliest, or at least one of the earliest, intelligence reports of this nature. German prisoners continued to supply such information until the final months of the war as was the case of an NCO of the 102nd Infantry Regiment of the 32nd Division who was captured on June 28 1918. (Note 23) Another prisoner captured during the morning of September 13 1918 provided details concerning its impact upon the 104th Infantry Regiment of the 40th Saxon Division earlier that month. (Note 24) A number of

prisoners provided vivid descriptions and statistical estimates of German casualties following a British gas attack on October 14 1917.

The British report which incorporated their information went on:

Last of the 4th Company of 163rd Infantry Regiment lost more than half its strength as a result of one of our attacks. The prisoner, an active soldier of five years standing, wept bitterly when he referred to the attack, as he stated he lost all his former comrades by it. (Note 25)

Like their British counterparts, the French received a considerable amount of secret, sensitive and militarily important information from their prisoners. The information provided not only concerned the immediate battlefield situation in which the unfortunate prisoners were captured but sometimes included highly revealing related intelligence about such subjects as German poison gas facilities behind the line. Occasionally prisoners passed on invaluable industrial and scientific intelligence too. Some of this information was extremely detailed. For example, in 1915 a prisoner of the 3rd Marine Infantry Regiment informed his French captors that a depot of asphyxiating gas had been established at Mariamkerke near Ghent. (Note 26) This prisoner also revealed that various companies of his regiment had been selected to form a special company to work with poison gas cylinder apparatus and he went into much detail to explain their work. The prisoner did not cease there however. He went on to disclose information about a secret chemical factory at Papenburg in East Friesland. He further admitted that although information about the factory had been kept secret, he had heard workmen there discussing the poison gasses that were being produced at the factory and the various ways in which they were to be deployed. (Note 27)

The French passed on to their British allies a stream of valuable tactical intelligence information. For example, following the first major use by the British army of the Livens Projectors at Arras in April 1917, the following details from enemy prisoner interrogations were forwarded to the British by the French Intelligence Department:

The large gas projectors caused very heavy casualties on the 1st and 2nd line trenches. About 17 percent of the total strength of the 5st Regiment was put out of action by the gas, and it was only 600 strong when it was relieved after April 9th. The 12th Company had only 6 men left. A prisoner of a Grenadier regiment said that it was generally known in Douai that in the gas operation before the infantry assault on 9th the 14th Bavarian Division lost 200 killed by gas and had a total of 500 to 600 casualties. (Note 28)

Collectively, this information was an intelligence gold mine for the allies. Despite its often subjective and fragmentary nature, French and British intelligence received a flow of tactical information about the battlefield impact and general progress of their gas war. Prisoner information also cast additional light on the Enemy's development, production and deployment of poison gas weapons as well as adding useful logistical intelligence.

It may be significant that most, though certainly not all, of the prisoner documentary evidence in the French and British archives concerns incidents in the latter part of the gas war, especially in 1918 when

the fortunes of war finally turned against Germany. (Note 29) Not only were more German soldiers captured in 1918 than in previous years of the conflict, but there was also a greater likelihood of capturing more demoralised and exhausted troops who may have been more amenable to disclose, what amounted to, classified information. (Note 30) It is perhaps necessary to connect this point to a more general observation about the apparent willingness of German prisoners to reveal such sensitive information to their captors.

According to Beach the British Expeditionary Force captured 330,000 German soldiers during the war. (Note 31) In the relatively quiet period of trench warfare, prisoners would usually be taken singly or in small groups. This presented no real challenge for the intelligence staffs and they were therefore expected to subject each one to a full examination. (Note 32) The complication came during amid active operations when considerable numbers of Germans were imprisoned by a mixture of British units and the demand for intelligence was at its highest. It was known that a prisoner's psychological condition on capture was in the main a "confused combination of stupor and surprise" and that the most valuable interrogations occurred as soon as possible after capture. By September 1915 the central point for this critical processing was the division. Around ten percent of the prisoners would be exposed to a "quite cursory" interrogation in order to secure instant recognition of the German units engaged and to meet any compelling tactical intelligence requirements imposed by the divisional staff. (Note 33)

During the mobile operations of late 1918 the divisional intelligence staff would proceed ahead of the leading brigade to carry on this early questioning. Accordingly, most prisoners were hastily moved back to the Corps "cage" where they were subjected to full examination and in several instances, thorough interrogation. A small number of prisoners, mainly specialists, would be sent to Army headquarters and in some cases to General Headquarter for their examination. These prisoners of particular interest would be "kept at Army [headquarters] until everything [they knew] had been extracted from them. (Note 34) Beach argues that the procedure of questioning prisoners developed as the war continued. The most convenient location was a particular room within the "cage". (Note 35) This was arranged to undermine the sang-froid that prisoners often retrieved by the time they arrived at the Corps "cage". The British intelligence officers generated the ambience of an "orderly room" whereby the prisoner would be marched in, stood to attention and subjected to exhaustive questioning in an authoritative fashion. Besides their linguistic and psychological abilities, British interrogators could request other services to support them in their work. (Note 36) By 1918 the British were likewise engaging native-speaking decoy prisoners, known as "pigeons" as well as installing listening apparatus in order to acquire "unwitting" information from prisoners. (Note 37) The general contribution to intelligence made by prisoners cannot be underrated. In 1917, the Second Army maintained that it was the most conspicuous of all their sources. Furthermore, some prisoners also provided unequivocal insight into matters of strategic gravity. The most valuable were deserters. (Note 38)

Although no detailed investigation into the methods the French intelligence services employed to extract information from their POW's has been published, what the present discussion—concerning the gas war—would indicate is that both allies were highly successful in obtaining detailed and valuable intelligence from German prisoners of war. Moreover, the volume of POW gas war intelligence information increased during the summer and autumn of 1918 even though, as Beach points out, German soldiers were better informed about what to expect from their British inquisitors as the war progressed. (Note 39) But why did the enemy prisoners reveal so much to the allies?

There is a complicating factor which could throw light on the POW issue. This concerns the absence of explicit, precise and unequivocal wording in the international conventions that then applied to the rights and obligations of prisoners of war. During the First World War deficiencies in the Hague Conventions of 1899 and 1907 concerning the treatment and rights of prisoners of war were highlighted. In particular, the implications arising from the imprecise wording within a number of its Articles had become a source of concern. Some of these defects were partly remedied by special arrangements made between the belligerents in Berne in 1917 and 1918, but it was not until 1929 that what is popularly known as the Geneva Convention was adopted by many nations. Significantly, Part II, Article 5 of the Convention states:

No pressure shall be exercised on prisoners to obtain information regarding the situation in their armed forces or their country. Prisoners who refuse to reply may not be threatened, insulted or exposed to unpleasantness or disadvantages of any kind whatsoever. (Note 40)

Prisoners in the First World War, unlike those from the western armies in the Second World War, lacked the guidance, clarity and reassurance of this caveat. Nevertheless, the serious implications of the German prisoners' actions in relating military information to the allies exploded under the public spotlight no less than fourteen years after the end of hostilities. (Note 41) A German prisoner (August Jaeger) who was caught a few days before 2nd Ypres and who revealed to his French captors information about the forthcoming first German poison gas attack suffered the misfortune of having his identity revealed by General Ferry in an article published in 1930. (Note 42) Despite the passage of time, the response of the authorities in the Weimar Republic to this revelation was severe and unforgiving. The former prisoner of war was arrested and stood trial at the Leipzig Tribunal for high treason. He was found guilty and sentenced to ten years imprisonment in December 1932. (Note 43)

3.2 Espionage and Franco-British Intelligence

The other major channel of information in the gas war was spying. Unfortunately, given the clandestine nature of espionage, especially in wartime, the primary source materials relating to raw intelligence in the French and British archives are correspondingly thin, being far more incomplete than those relating to prisoner of war intelligence. All that can be attempted here is a qualified but selective overview of the contribution of spying to the allied gas campaign with special reference to the mutual exchange of intelligence information. It is perhaps necessary to begin by underlining the implications of the very

recent pre-First World War origins of official British espionage. It was only with the establishment of the Secret Service Bureau in 1909 that any sustained progress was made to develop a professional covert operation organization in Britain. (Note 44)

However, before the new body could begin to produce tangible results it needed to establish an intelligence infrastructure underpinned by reliable and well-placed agents. By the time war with Germany had broken out this infrastructure was far from complete and only imperfectly tested despite the opportunities afforded by peace-time conditions. What is particularly pertinent for this discussion is that even in the immediate pre-war period the French had shared with their new British allies via their Second Bureau—which had been well established long before its British counterpart—highly secret intelligence gathered from their agents about the German military threat to France.

Once the gas war was underway, the regular exchange of intelligence information became an enduring feature of Franco-British co-operation. It is instructive, by concentrating on evidence from 1915, to demonstrate how immediate and wide ranging that co-operation was. Within three weeks of the first enemy gas attack, the British, in a report dated May 14 1915, informed the French that the German army were preparing to use sulphide acid against their lines and advised them to fortify their Western Front defensive systems. (Note 45) The French High Command responded at once, dispatching what gas protection equipment was available, even though at this early stage of the gas war allied anti-gas equipment was both relatively primitive and in short supply. Wide areas of gas intelligence data were exchanged. For example, on May 25 1915 the British alerted their French counterparts to the location of an enemy poison gas factory in Hoechst, near Frankfurt. The British report suggested that as their intelligence had established that the plant was not heavily defended, it would be possible to attack it by air raids. In a similar vein the British War Office contacted Colonel Vicomte de la Panouse in the French embassy on July 4 1915 about a German factory owned by the Griesheim Electron Company in Badishe Rheinfelden. (Note 46) Considering the factory an easy target for French and British air attack the report went on: "This factory is also making asphyxiating gas and we should be very glad to see it destroyed". (Note 47) Ten days later, on July 14 1915 in a report transmitted to General Huguet, the Chief of the French Military Mission to the C-in-C of the First Bureau, British intelligence informed him that the Germans were producing huge quantities of phosgene gas at certain plants in Cologne and Breslau. (Note 48) This area of industrial espionage was another important aspect of Franco British gas war intelligence sharing and it involved exploiting the global spy networks of the two allies. An indication of the importance of this activity can perhaps be appreciated by reference to the reports of just one French agent, codenamed Chevalley, during the months following the first German poison gas attacks.

It is not clear who Chevalley really was. There are no clues as to his identity in the French military archives but he appeared to have had a Scandinavian base in 1915 as some of his reports were sent to the French Second Bureau from Norway via Britain. (Note 49) A letter dated May 8 1915 concerns Chevalley's investigation of German production of nitrates through its Norwegian subsidiaries and

affiliates and of the work of German-owned electro-chemical plants there. On a related theme, German control of nitrate production in Chile was the focus of Chevalley's report of 31 May. He pointed out that having invested 125,000,000 marks the Germans had come to monopolise the output of Chilean nitrate factories which were producing 500,000 tons of the chemical annually. (Note 50) Later, in a letter dated December 7 1915, Chevalley disclosed how the German army was producing large quantities of a new gas based on bromide and chlorine to be used, in part, as a shell filling and possibly as an aerial weapon. (Note 51) An examination of the German army's subsequent gas attacks in late December indicates that the enemy did indeed employ this new chemical agent but not, as it turned out, from aircraft.

4. Conclusion

In this examination attention has been drawn to the importance, openness and extent of intelligence sharing in the gas war and of the exploitation of allies' global intelligence networks. The value to both countries of sharing their extensive prisoner of war intelligence "confessions" has been stressed with reference to both French and British archival material. Elizabeth Greenhalgh in her Victory through Coalition has lamented that it was a "tragedy that vitally necessary co-operation was achieved more easily in the civilian (bureaucratic) sphere than in the military sphere". (Note 52) While the findings of the present, more narrowly focused, investigation endorse this judgment on a general level, the specific areas of gas war co-operation point to a more complex picture of allied achievement. (Note 53) Of the major areas of Franco-British co-operation in the great gas war, the importance and success of intelligence sharing is probably the most difficult to assess in view of the more fragmentary state of the archive evidence. However, its significance can perhaps be appreciated negatively. The allies were from the beginning and throughout much of the gas war in a disadvantaged position, as far as research, production and offensive tactics were concerned. Following the major intelligence (and operational) failure at Ypres; it became all the more important for the French and British to forestall German chemical weapon initiatives by effective and wide ranging intelligence activity. By closely sharing their intelligence finds the allies, arguably, further reduced their chances of being caught unaware by their powerful enemy. In the event, there were relatively few major surprises in store for the allies which they had not found out about the advance. Even the German introduction of mustard gas in 1917 was, in part, anticipated by allied intelligence.

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Notes

Note 1. This issue is discussed in detail in Michael Occleshaw, Armour Against Fate, British Military Intelligence in the First World War (London: Columbus, 1989), esp. Chap. 2, "Spy", pp. 35-71; John Ferris, The British Army and Signals Intelligence during the First World War (Stroud: Alan Sutton for the Army Records Society, 1992), esp. "Introduction", pp. 1-2. James Beach, "British Intelligence and the German Army, 1914-1918", (PhD London: University College London, 2004), pp. 11-14.

Note 2. For more details see, The National Archives, hereafter TNA KV4/1 83, report No.[n], from Major

General W. Thwaites (Directorate of Military Intelligence) to the War Office, entitled "Historical Sketch of the Directorate of Military Intelligence During the Great War 1914-1919", 6 May 1921.

Note 3. TNA KV4/183, report No.[n], 6 May 1921, op.cit.

Note 4. Matthew Seligmann, Spies in Uniform, British Military and Naval Intelligence on the Eve of the First World War (Oxford: Oxford University Press, 2006), p. 1.

Note 5. TNA KV4/183, report No.[n], 6 May 1921, op.cit.

Note 6. TNA W0106/149, "Intelligence in European Warfare", lecture by Lieutenant-Colonel J. E. Edmonds, January 1908.

Note 7. Seligmann, op.cit., p. 4.

Note 8. Seligrnann, op.cit., p. 13.

Note 9. Seligmann, op.cit., p. 8.

Note 10. Beach, op.cit.

Note 11. The second part of his work concentrates mainly upon the influence of intelligence perceptions at GHQ between 1916 and 1918.

Note 12. Douglas Porch, The French Secret Services ,from the Dreyfus Affair to the Gulf War (London: Macmillan, 1995), p. 66

Note 13. Ibid.

Note 14. Joffre, Mémoires du Maréchal Joffre (Paris: Librairie Pion, 1932), Vol. 2, p. 204.

Note 15. See for example, TNA W0158/294 and TNA W0158/122, for detailed accounts of German prisoners interrogated by the allies. See for example, TNA WO1 58/294, extract No.[n], from Lieutenant Colonel (signature unclear), General Staff to [n], 27 June 1917. Rudyard Kipling, poem: "The Lesson." First published in The Times, 29 July 1901.

Note 16. Service Historique de la Défense (Vincennes) hereafter SHD, 16N832, see for example letter No. 5,969, 2 September 1915; SHD, 16N832, memo No. 4,395, 25 July 1915; SHD, 17N376, letter No. 89, 19 May 1915; and SHD, 17N376, letter No. 85,4 July 1915.

Note 17. SHD, 16N826, memo No. 2,260, from General Huguet to the War Office, [n] May 1915.

Note 18. SHD, I 6N826, memo No. 3,868, from the Head of French Military Mission to the First Bureau, entitled "Extract of Information Forwarded by the British Army about Asphyxiating Gas," 6

May 1915.

Note 19. SHD, 10N57, memo No. 12,074, from the Under-Secretary of State for Artillery and Munitions to the Head of the French Gas Service, 31 December 1915.

Note 20. SHD, 1 6N832, report No. 7,207, from General Huguet to the Commander-in-Chief (C-in-C), 8 October 1915. Yet, neither in the archives at Vincennes nor Kew were documents found to match any of the French replies to the British.

Note 21. For examples of the wider significance of German P.O.W information, see Christopher Andrew, Secret Service. The Making of the British Intelligence Community (London: Heinemann, 1985) esp. pp. 170-171.

Note 22. SHD, I 6N832, report No. 7,207, op.cit.

Note 23. TNA WO158/294, extract No. [n], written by a Captain who was Chemical Adviser to II Corps to [n], 17 September 1918.

Note 24. TNA W0158/294, report No. C.4.6, from Chemical Adviser Second Army to the War Office, entitled "Extract From Examination of Prisoners of 104 I.R., 40th Saxon Division Captured on the Morning of 13 September 1918", 15 September, 1918.

Note 25. TNA WO158/294, extract No. 62, [n], no details about the sender or the receiver, stamped on 6 December 1917.

Note 26. TNA WO 158/122, letter No. 26, "Note on Asphyxiating Gases", 21 May 1915. There were no details about the sender or receiver of the document.

Note 27. TNA W0158/122, letter No. 26, 21 May 1915, op.cit.

Note 28. C. H. Foulkes, Gas! The Story of the Special Brigade ([1934] Uckfield: Naval and Military Press, 2002), p. 213. Designed by Captain William Livens of the British army, the Livens Projector was an 8 inch (200mm) caliber mortar-like weapon with a range of about 1,500 meters. The projector drums contained about 14 kg of toxic gas usually phosgene. On occasion scores of projectors were fired simultaneously into German positions, the density of gas often overwhelming the enemy's respirator.

Note 29. J. Keegan, The First World War (London: Hutchinson, 1999), pp. 440-442, for an account of how the German army started to disintegrate in August 1918 before withdrawing to the Hindenburg line in September. On 28 September Ludendorf (Hindenburg's partner in the overall direction of the German war effort), informed the Field Marshal that Germany's position was hopeless and that an armistice should be sought from the allies.

Note 30. In the three months between the Battle of Amiens and the Armistice of 11 November 1918, the British army under Haig captured 188,700 prisoners of war. Andrew, op.cit., p. 173. For details see "German Prisoners of War in the UK 19 14-1918" in I-1W. Wilson (ed.), The Great War (London: Amalgamated Press, 1918), Vol. 12, pp. 401-414. No full list of German prisoners of war survives in the British National Archives. Originally, lists of German prisoners were dispatched to the Prisoners of War Information Bureau in London which in turn forwarded the information to the International Red

Cross H.Q in Geneva. German bombing of the bureau in 1940 largely destroyed their records. Information in H.W. Wilson above indicates that on 31 December 1916 there were 48,572 German military prisoners of war in British Camps in the UK. By the end of 1917 this figure had increased to 118,864. The numbers continued to increase in 1918, especially after July of that year. Surviving lists of German P.O.W's can be found in TNA W0900/45, TNA W0900/46; and TNA W032/18622. See also TNA F0383 and TNA CAB 45/207.

Note 31. Beach, op.cit., p. 27.

Note 32. Ibid.

Note 33. Beach, op.cit., p. 28.

Note 34. Beach, op.cit., pp. 28-29.

Note 35. Beach, op.cit., p. 28.

Note 36. Beach, op.cit., pp. 30-31.

Note 37. Later in the twentieth century the phrase "stool pigeons" was the name given to police informers.

Note 38. Beach, op.cit., p. 33.

Note 39. Beach, op.cit., p. 31.

Note 40. The United Nations War Crimes Commission, Law Reports of Trials of War Crimes (New York: William Hein Bufalo, 1997), p. 105.

Note 41. Unlike Germany, Britain, France, Italy and the USA, the USSR was not a signatory to the Geneva Convention. There is an extensive literature dealing with World War II prisoners of war. Sec for example, André Courvoisier, Un Aller et Retour en Enfer (Paris: Edition France-Empire, 1986), pp. 141-191; Robert Christophe, Les Anné es Perdues: Journal de Guerre, 1939-1945 (Parçay-sur-Vienne: Anovi, 2008), pp. 161-193; see also, David Rolf, Prisoners of the Reich: Germany's Captives, 1939-1945 (Sevenoaks: Coronet, 1988), pp. 204-210; Daniel Drooz, American Prisoners of War in German Death Concentration and Slave Labour Camps (Lewinston New York: Edwin Mellen Press, 2004), pp. 1-8; and Charles Rolhings, Prisoner of War: Voices from Captivity During the Second World War (London: Ebury, 2007), pp. 3-10.

Note 42. General Ferry, "Ce Qui S'Est Passé Sur L'Yser", in La Revue des Vivants, July 1930, Vol. pp. 899-900.

Note 43. It is perhaps suggestive of the enduring traditional values of Wilhelmine Germany that Jaeger was treated this way by the Weimar Republic's authorities. Within a month of the passing of the sentence Adolf Hitler became Chancellor of Germany.

Note 44. Seligmann, op.cit., p. 13. See also Andrew, op.cit., esp. Chaps 1 and 2.

Note 45. SHD, I6N832, report No. 66, from the War Minister to the C-in-C, 14 May 1915.

Note 46. SHD, 17N376, report No.[n], from the War Office Whitehall to the French Embassy, entitled "Copy of an Anonymous Communication Received by the War Office", 25 May 1915.

Note 47. Rheinfelden is a town on the district of Lorrach in Baden-Wurttenberg, Germany. It is situated on the right bank of the Rhine across from Rheinfelden, Switzerland, is and 15 km east of Base.

Note 48. SHD, 17N376, report No. 85, from the War Office Whitehall to the French Ernbassy, 4 July 1915.

Note 49. SHD, 16N832, report No. 4,032, from General Huguet to the C-in-C, 14 July 1915. Breslau is a town situated in what is now south-west Poland.

Note 50. SHD, 17N376, letter No. 493, from Christiana and signed by Chevalley to the Second Bureau, 8 May 1915.

Note 51. SHD, I 7N376, letter No. 348, from Chevalley to the Second Bureau. He also discussed Norwegian exports of nitrate of lime to Britain and France, 31 May 1916.

Note 52. Elizabeth Grennhalgh, Victory Through Coalition, Britain and France During the First World War (Cambridge: Cambridge University Press, 2005), p. 283.

Note 53. Hanene Zoghlami, "The Franco-British Gas War on the Western Front 1915-1918, and the Response of the Domestic Press in France and Great Britain" (Ph.D) London: Roehampton University, 2012.