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Assessing the Impact of Intelligence: The "Good Source" and Anglo-American Intelligence in the Second World War and After

The study of intelligence during the Second World War rests on a large and fairly complete documentary base in the public domain and a long and lively debate between specialists. The lessons it teaches are balance, patience, and precision. The declassification of the Ultra secret forced a reconsideration of operations in the Second World War, yet in hindsight, even the best first-generation studies in the field overestimated the significance of their topic. The more enthusiastic the account, the more misleading it is. Contrary to a well-known statement by Sir Michael Howard, the history of the Second World War has not had to be rewritten simply because Ultra was unveiled, but it did have to be rethought. Non-specialist academics routinely exaggerate the effect of intelligence on the war and its literature. Some specialists do the same. The mere act of incorporating intelligence into an analysis does not automatically improve its quality. As with any marriage, one has to work at it. "Turning the Hinge of Fate" illustrates all of these issues.

This work is right on its main points. Intelligence shapes the formulation and the execution of the policy of states. In order to understand their fields, international and strategic historians must know intelligence, and its history. They do not. This piece is even more right in its selection of audience. Since 1985, intelligence history has gone a long way, emerging as a genuine sub-discipline, but at a cost. Specialists have tended too much—mea culpa—to write for each other, the people who most would appreciate the work involved in clearing the path. This tendency, however natural, has blurred the connections between intelligence and the actions it affects, even though their clarification is the point of the path. This weakness, particularly pronounced about diplomatic

matters, damages the study of intelligence as much as it does that of strategic or international history. C.J. Jenner has done well in bringing his story to this audience, and in showing them how military events in 1942 shaped power and policy throughout the cold war. His well researched study is the first serious account of a complex issue, which long has puzzled specialists.

Between January and June 1942, the United States military attaché in Egypt, Colonel Bonner Fellers, was ordered to report in detail on British capabilities, intentions, operations and forces. British authorities gave him great access to material on these matters. He reported his findings to Washington via the best cryptographic system used by American authorities at that time, the so-called Black Code. Without the Americans knowing the fact, the Italians and Germans were reading that system. Thus, they had current access to Bonner Feller's reports. Solutions of these messages were treated seriously by leading decision makers in Berlin. The commander of Panzer Armee Afrika, General Erwin Rommel, trusted and acted on his "little fellers". This intelligence affected his decisions for several months, during which time he scored some spectacular victories. By June 1942, however, the British, guided by their ability to read a wide range of high level German communications through Ultra, discovered the compromise. They informed the Americans, who withdrew Bonner Fellers from Cairo. His traffic ended and American cryptography improved.

Jenner's originality lies in assessing Bonner Feller's access to information in Cairo and his reports, in demonstrating how Britain discovered the compromise and brought it to American attention, and in his claims for the significance of these events. Jenner concludes that these events fundamentally affected the desert campaign, first by strengthening and then by crippling Rommel's power on the battlefield, and later by shaping allied strategy during 1942, and the special relationship between Britain and the United States, which has affected world power ever since.[1]

Jenner's account of these issues is good, but imperfect. There are minor errors of fact--the Tyler Kent case occurred in 1940, not 1941, while during 1943 the allies pursued the Axis from Africa to Italy via Sicily, not Crete.[2] Some citations from the RG 165 series at NARA lack box numbers, hampering use or criticism of his sources, while Jenner does not appear to have consulted the important collection of Bonner Fellers papers at The Hoover Institution. Above all, he falls victim to common problems in the judgment of the relationship between intelligence and action. An examination of this relationship in the case of one campaign will illustrate its peculiarities as a whole, and the difficulties they pose for strategic and international historians.

[1] Jenner, "Turning the Hinge of Fate," Diplomatic History, 32:2, (Spring 2008), pp. 168, 175-6, 190, 201.

[2] Ibid., p. 171, 201.

In order to gauge how intelligence affected military operations, one must consider the matter from both perspectives. Historians rarely do so. Hence, they misconstrue its effect, whether by underrating or overestimating it. Jenner mistakes the value of the "Good Source" to Rommel in both ways, overstating its significance as a means to achieve intended aims and underestimating the impact of its unintended consequences, and for two reasons.

First, he ignores the role of another, and equally important, source -- low grade signals intelligence -- even though he knows about it. In the desert, most German success in intelligence before October 1941, and much of it until July 1942, came simply from the interception of plain language radio messages between British commanders, and traffic analysis against the external structure of their communication systems.[3] These sources, provided by Strategical Intercept Company 621, commanded by Captain Alfred Seebohm, compromised the Battleaxe offensive of June 1941, so enabling a terrible counter-attack by Rommel. After concluding they had fallen victim to German communications intelligence, the British radically improved their signals security and intelligence. These improvements let them catch Rommel by surprise with their Crusader offensive in October 1941, maintain parity with his intelligence during that battle, and helped them to win it.[4] Thereafter, Britain contained, without eliminating, the power of Strategical Intercept Company 621 before battle, but remained vulnerable to it during operations. Incidentally, many writers make the same mistakes about this body as Jenner does with the "Good Source", by overemphasizing its significance, ignoring that of other sources, and arguing that its capture in July 1942 destroyed all of Rommel's intelligence, and thus his fortunes.[5] In fact, between January and June 1942, these two forms of intelligence aided each other, and matched all British ones, including Ultra, with the "Good Source" being most useful before operations and Strategical Intercept Company 621 during them. Between May 1941-June 1942, Rommel was as well served by intelligence, and sometimes had as great a superiority over his enemies in that matter, as any other commander in the Second World War.

Second, Jenner cites many writers who claim, mostly without evidence,[6] that the "Good Source" always gave Rommel perfect knowledge between January and June 1942, which he

[3] John Ferris, "The British Army, Signals and Security in the Desert Campaign, 1940-42," in John Ferris, Intelligence and Strategy, Selected Essays (London, Routledge, 2005), pp. 181-238.

[4] John Ferris, "The 'Usual Source': Signals Intelligence and Planning for the Crusader Offensive, 1941," Intelligence and National Security, 14: 1, (Spring 1999), pp. 84-118.

[5] Otto von Behrendt, Rommel's Intelligence in the Desert Campaign, 1941-1943 (London, Kimber, 1985), pp. 168-69; Ronald Lewin, The Life and the death of the Afrika Korps, a Biography (New York, Quadrangle Books, 1977), pp. 35-36; David Irving, The Trail of the Fox (Focal Point Books, New York, 1977), p. 195.

[6] The exception, Behrendt's Rommel's Intelligence pp. 156-58, is insufficiently critical of its sources and characters. In particular, it ignores the Afrika Korps' well known intelligence failure before the battle of Gazala. The account which best incorporates German intelligence into an analysis of these operations is

used well and directly, thus explaining his successes, just as its disappearance explains his failures. This overstates the case. Throughout 1941 and early 1942, Bonner Fellers had extraordinary entrée to British forces in Egypt. Solutions of his telegrams to Washington could have provided material as good as that gained by any but the greatest successes of Ultra or Magic. Before the Crusader offensive he reported, in precise and accurate detail, matters like British numbers of aircraft and tanks, by specific types, and their assessments of German and Italian strength in such weapons. The latter would have shown the Axis that British intelligence was remarkably accurate, raising obvious questions about how that could be.[7] Toward the end of the Crusader offensive, where Bonner Fellers spent much time on the front, he reported accurately on British perceptions, policy, performance, tactics, weapons, and the success of their low grade signals intelligence against German traffic. Even then, however, the British kept Bonner Fellers ignorant about key matters, like their intentions, plans and dispositions, on which he was forced to guess—not particularly well, but still from an informed basis, and one that was far better than that of any of the Axis leaders.[8]

Nor did Bonner Fellers know about Ultra, even when he learned of details taken from it. Here, standard British security measures mattered to the war. Had Bonner Fellers known of Ultra, and mentioned it (or more data taken from that source) on messages sent by the Black Code, his strongest means for radio communication with Washington, the cryptological war might have taken a different course. Even so, in 1942 German codebreakers easily could have conducted a damage assessment by working back through their copies of his ciphertext messages of 1941, which would have uncovered signs of possible British cryptanalysis. Instead, they missed one of their better opportunities to uncover the Ultra secret. In turn, the weaknesses in American cryptography during 1941-42 help to explain and justify British caution about fully informing United States authorities regarding their cryptanalysis.

Until January 1942, Rommel could not profit from such material, because the Germans were not reading it. During the next six months, however, the "Good Source" sparked him to two major actions. In one case, the counter offensive of January--February, intelligence drawn to equal degrees from Bonner Fellers and Seebohm directly enabled operational success, by showing British vulnerability to exploit. In the other, and greater,

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still J.A.I. Agar-Hamilton and L.C.F. Turner, Crisis in the Desert, May-July 1942, Union War Histories (New York, Oxford University Press, 1952). For discussions of the problems in British forces, signals, security and command, and their improvement, cf. Ferris, "The British Army," _op.cit_., and David French, Raising Churchill's Army, The British Army and the War Against Germany, 1919-1945 (Oxford, Oxford University Press, 2000).

[7] Bonner Fellers, telegram to War Department No 153, 17.10.41, passim, Bonner Fellers Papers, Box 39, Hoover Institution, Stanford University. These papers do not contain his telegrams of January to June 1942, but include some other reports from that period, and much valuable material from 1941.

[8] Bonner Fellers, telegram to War Department No 468, 31.12.41, passim, ibid.

case, before and during Rommel's Gazala offensive of May-June, the story was more complex. British security (perhaps prompted by Ultra's warnings about this compromise, which were more influential than Jenner realizes) kept Bonner Fellers ignorant of key matters. He did not report others, while the Germans interpreted his reports too enthusiastically. Before Gazala, Bonner Fellers' reports grossly underestimated British armoured strength in the theatre; hence, the Germans missed 400 tanks which reached the front during the battle, and hundreds more which helped to stall their advance after it. Nor did he note the quality of the American Grant tank, which shocked the Afrika Korps on the first days of the battle, and almost won it, because only a seer could have predicted their impact. This limit to the classic strength of military signals intelligence—the fact that accurate information on numbers of enemy weapons and units may matter less than ignorance of their quality when deployed against your own—also marred British assessments before Crusader.[9] Bonner Fellers provided not just data but also estimates, intended for General George Marshall, Chief of Staff to the United States Army. Inadvertently, these reports--professional, well informed, and fairly accurate, if too pessimistic about British weaknesses-- influenced no one more than Rommel, who added an American intelligence advisor to his staff. Above all, Bonner Fellers' insistence that that the British would remain weak until June, and be crushed if the Axis made Egypt their leading priority, reinforced Rommel's hopes and shaped his plans, even though he knew the assumption about Axis priorities was wrong.

Rommel used this intelligence exactly as the British had done with Ultra before Crusader, to illuminate enemy strength and reinforcements, which he could compare to knowledge about his own forces. In particular, he expected to build up power faster than the British, and to attack when he judged he had reached the moment of maximum relative strength, which turned out to be May. Whereas British calculations of these issues in the autumn of 1941 had been good, however, his assessment of May 1941 was wrong, precisely because he trusted Bonner Fellers' estimates and facts. Rommel launched the Gazala offensive on the basis of great hopes, combined with a gross underestimation of the quantity and quality of British tanks on the front, and a misunderstanding of their dispositions. The combination of the "Good Source" and Rommel led his forces almost to annihilation. He escaped disaster only because his forces were good and British command bad, aided, to lesser degrees, by Italian signals intelligence and Strategical Intercept Company 621, with the "Good Source" irrelevant. Bonner Fellers led Rommel into an intelligence failure, which produced an operational triumph, just as the success of Ultra before Crusader led the British first to disaster, and then to a damned near run thing. The paradoxical nature of intelligence is revealed by the comment on its role in Gazala of Rommel's chief of intelligence, F.W. von Mellenthin: "Perhaps, fortunately, we underestimated the British strength, for had we known the full facts even Rommel might have baulked at an attack on such a superior enemy."[10] In its last days of life, after Tobruk fell, the "Good Source"

[9] Ferris, "The 'Usual Source'."

[10] F.W. von Mellenthin, Panzer Battles, (New York, Ballentine Books, 1956), p. 94.

bolstered Rommel's decision to drive all-out on Alexandria, his native over-optimism reinforced by Bonner Feller's belief the British would crack under one last blow. Again, both men were wrong; this time the intelligence failure led to German defeat.

The "Good Source" also sparked Axis attacks which crippled a major British attempt to reinforce Malta on 13 June; here, however, it was a tertiary element in Axis signals intelligence at sea, which was better than Ultra between 1940-42 and enabled great damage to the Royal Navy. Nor did the Axis ever act on the biggest fact betrayed by the "Good Source"—that in early 1942, the British Mediterranean Fleet temporarily was out of action, without any battleships, aircraft carriers, or heavy cruisers.[11]

All told, Jenner ignores one of Rommel's two major sources of intelligence, and gives credit for its effect to the other. He overstates the value to Rommel of the "Good Source", and of signals intelligence as a whole. He assumes that intelligence mattered to Rommel, perhaps more than any other factor, including power and generalship. In fact, the value of intelligence was defined by Rommel's characteristics as a commander. He always was optimistic in interpretation. The easiest thing for intelligence to do was prompt Rommel to attack. The hardest thing was to get him to wait. A good general, but no Hannibal, Rommel made able use of hard and hot information, but not of ambivalent material requiring thorough and thoughtful analysis. You always can tell a pilot, but not much; so with Rommel. Hot and hard intelligence was essential to his victories in three Corps level actions against enemies of equal strength, in June 1941, January 1942, and February 1943, at Kasserine Pass. Rommel, however, used good but ambivalent intelligence badly, before and during two Army level battles against numerically equal enemies, in Crusader and Gazala. Finally, Rommel's performance moved from incompetent to mediocre at Corps, Army and Army Group levels, when he confronted defenders of equal numbers or attackers of greater strength, and with better intelligence, as happened at El Alamein, Alam al Halfa, Medinnine, and Normandy. The range of these outcomes shows the need for care in assessing how intelligence affected Rommel's operations. To have outstanding intelligence, better than his enemies, was a major advantage for him. Merely to have good intelligence, equal to his enemies, was not. Any sort of inferiority was a major handicap. He depended heavily on intelligence, but was not a good consumer of it. These generalizations were shaped by other factors: intelligence worked well for Rommel when he could play to his strengths—fluid operations at Corps level—but not when he had to work to his weaknesses, set piece operations at Army or Army Group level, where he was good, but not great. Altogether, Rommel gained from intelligence in small actions, but not major ones. The "Good Source" did not matter much because Rommel did not use it well. His opponents were better at understanding and acting on communications intelligence, though until July 1942, their planning and execution of operations was worse.

[11] Note 7, op.cit.

In assessing these issues, Jenner falls victim to fallacies common in the study of intelligence. He oversimplifies complex problems of causation. He makes it seem as though he is doing so, even when he is not, through the way he expresses his understanding. Intelligence on its own never can cause any effect, because it is a form of influence, not of power. It does affect events, but in ways ranging from minor to major, and only as one part of complex patterns of causality, which combine the nature of information, the perceptions of decision makers and their means of action, in bilateral or multilateral relationships between competitors. The impact of any such factor can be assessed only in a rough and ready fashion, by determining its function in the evolution of any event, and placing it within the context of other causal relations. Assessment is most easy when one, but only one, factor changes at a given time, letting analysts gauge how it affects the whole pattern, as with dependent and independent variables in a scientific experiment. Historical arguments often take the form: when A,B,C existed, X was the case; when D came to be, so did Y; therefore, D caused X to become Y. Unfortunately, it is rare for only one factor at a time to change while the rest remain constant—historical events are not laboratory experiments to be framed and repeated at will.

To further complicate matters, historians frequently express their understanding of complex issues in monocausal terms. They imply that only one new or changing factor affected circumstances, which therefore must alone and directly have caused alterations in events, overlooking simultaneous developments in other elements of the equation. Even more: because of the looseness of their language, scholars often literally make such monocausal statements when they do not mean to do so. Particular problems emerge from Jenner's frequent use of that treacherous term, "decisive cause".[12] Generally, when historians assess the significance of individual causes for events, they rank them as irrelevant, contributory or necessary (any cause without which a given effect could not occur). Many factors in a chain of causation might be "necessary" to the completion of an effect. For example, the turning of a key in the ignition, the working of a spark plug and the presence of fuel in the tank, all are necessary to the action of starting a car. Most debate about historical causation is over which matters were necessary to events. Sometimes historians try to rank order necessary causes, or determine which of them was the most necessary of them all, a master cause. In a negative sense, however, any necessary cause is a decisive one—without it, the effect in question cannot happen. Use of the language of decisive causes leads historical discussion toward danger. Where historians merely have proven that "A is a necessary cause of B, one of several," they say "A was the decisive cause of B," which others take to mean, "A was the only cause of B." All remaining factors, including many others without which B could not have occurred as it did, a group which collectively may be more important than B was individually, are

[12] Jenner, "Turning the Hinge of Fate," pp. 169, 175, 201.

treated merely as conditions for it.[13] Hence, historians may seem to claim more for any cause than they intend to do so. Certainly Jenner does so.

These problems in the understanding and expression of causation surface in the most mature study of the role of intelligence in any event. British and American intelligence veterans of the European war thought their finest hour was the work against the U-boats. That view was echoed by many scholars, who sometimes seem to regard naval operations virtually as a function of cryptology.[14] Marc Milner, a leading authority on the submarine campaign, retorted that studies of Ultra did not improve our understanding. On the contrary, they reinforced the greatest weaknesses in the literature: the tendency to focus on operational issues and to ignore the strategic, economic, and administrative issues that really won the submarine battle. Similar, if less sweeping arguments have been advanced by other students of the submarine campaign, like David Syrett and Jock Gardner, who argue that the U-boat really was beaten by its own technological limitations and allied power, especially the allocation of small numbers of aircraft, with intelligence playing a useful but secondary role in marking the kill. These judgments are complicated because only between June and December 1941 did intelligence, but no other major element of the campaign, change. From this situation has emerged the widespread view that Ultra saved 3,000,000 tons of British controlled merchant shipping during that period, a sizable though not war winning matter, and that its decline, combined with a rise in German communications intelligence, was significant to the triumphs of the U-boats during 1942, though less so than great changes in operational matters. In the heart of the battle of the Atlantic during the spring of 1943, however, changes in the power of Ultra coincided with the allocation against the U-boats of major reinforcements in warships, aircraft and anti-submarine ordnance. The simultaneity of changes in so many factors complicates any assessment of the impact of Ultra. However, no naval specialist regards it as more than a secondary factor in this turn of the tide. Some do not even think it was necessary to this process.[15]

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[13] Ferris, J.R., "The Intelligence-Deception Complex: An Anatomy," Intelligence and National Security, 4:4, October 1989, and W.H. Dray, "Concepts of Causation In A.J.P. Taylor's Account of the Origins of the Second World War," History and Theory, XVII:2, 1978.

[14] F.H. Hinsley, Thomas, E.E., Ransom, C.F.G. and Knight, R.C., British Intelligence in the Second World War, Its Influence on Strategy and Operations, Volume 2 (HMSO, London, 1981), pp. 169-234, 535-74, Volume 3 (1), (HMSO, London, 1984), pp 211-14. For a clear statement of F.H. Hinsley's views, cf., "British Intelligence in the Second World War," in Christopher Andrews and Jeremy Noakes (eds), Intelligence and International Relations, 1900-1945 (Exeter, 1987), p. 217-18; F.H. Hinsley, "World War II: An Intelligence Revolution," The Intelligence Revolution, A Historical Perspective, (Colorado Springs, 1988), pp. 10-11. For enthusiastic accounts of the role of Ultra in the battle of the Atlantic, cf. Jurgen Rowher, *The Crucial Convoy Battles of March 1943* (Naval Institute Press, Annapolis, 1977); John Winton, *Ultra at Sea*, (London, Leo Cooper, 1988).

[15] Marc Milner, "The Battle of the Atlantic," in John Gooch (ed), *Decisive Campaigns of the Second World War* (Frank Cass, London, 1990), pp. 45-64; David Syrett, *The Defeat of the German U-Boats, The Battle of the Atlantic* (University of South Carolina Press, Columbia, S.C., 1994); W.J.R. Gardner, *Decoding History, The Battle of the Atlantic and Ultra* (Naval Institute Press, Annapolis, 2002).

So too, in the desert during the summer of 1942, major and overlapping changes to intelligence and material power shifted the military balance. The loss of the "Good Source" to British security, and Strategical Intercept Company 621 through capture by Australians, aided the allies; but so did other factors. One, as Jenner notes, was a rise in the power of Ultra. Another, as he explains in a new way, was the provision of more and better American armour for the Eighth Army. Of greater importance than armour was the supply, purely from Britain, of more and better anti-tank weapons, eliminating the Eighth Army's greatest weakness, and of aircraft, strengthening its greatest area of superiority. Meanwhile, Germans and Italians were mired at El Alamein, far from their sources of supply, their flimsy logistics exposed to the razor of the RAF, forced into high intensity set piece battles at Army level, on thick and narrow fronts which could not be turned. These circumstances suited Axis strengths less, and British ones better, than any other in the desert, while the Eighth Army was commanded by a general who knew how to exploit these edges. The tide turned at El Alamein more because of changes in any one of these military factors than in intelligence, where the loss of the "Good Source" mattered less than the rise of Ultra. Indeed, insofar as the "Good Source" involves simply the provision of intelligence to Rommel, its loss is not even necessary to explain his fading fortunes in the summer of 1942.

The events which Jenner describes do not affect our understanding of the desert campaign as his rhetoric suggests. The "Good Source" contributed less to Rommel's victories than Jenner argues, and so its loss to his defeats. Yet changes in intelligence also affected the war more than they did the battle of El Alamein, because the discovery of the "Good Source" helped the allies more than its loss harmed Rommel. Exactly as he claims, Jenner does add two elements to our understanding of a bigger issue, the turning of the hinge of fate in the summer of 1942. Though direct evidence on these points is lacking, his reconstruction of events is persuasive. First, Winston Churchill's ability to show Franklin Roosevelt and other American authorities how poor was their cryptography, and to claim plausibly that it had shaped Britain's smashing defeat at Gazala, helped to prompt them into sending large shipments of tanks to Egypt: contrary to standard views, their actions stemmed less from generosity than embarrassment. All of these men overrated the impact of the "Good Source" on Britain's defeat; that miscalculation served directly to ease later allied victories. Second, Jenner indicates that, despite his own anti-British sentiments, Bonner Fellers influenced Roosevelt toward favouring the idea of sending American troops to North Africa in 1942, supporting British strategy rather than that of his own General George Marshall, to the benefit of the allies in this instance.

Jenner also helps to explain a key development in the cryptologic war, where the shield was as central as the sword. Across the board, between 1939-1942, Axis signals intelligence gave their masters as much useful material as did that of Britain. The attack on the Black Code was among the best Axis performances, but it was not the only one. In the battles of the Atlantic and the Mediterranean, German and Italians had more success against enemy systems than Ultra did. In the Middle East, the Germans read many major RAF

and Army codebooks. For several months, the British actually had to send some important messages over a codebook they knew was in the enemy's hands, relying for protection only on changes in the superencipherment systems! On the eastern front, German cryptanalysts ravaged Soviet traffic.[16] These successes occurred because of poor Allied cryptography rather than good Axis codebreaking. Thus, the "Good Source" was not fruit won from defeat of a difficult system, as was true of Ultra. Instead, the Germans made big gains from an easy kill against a mediocre system, badly handled, which carried very important information. By 1942, the British sent material equal in significance to that transmitted by Bonner Fellers mostly in Typex, a secure cipher machine which the Germans never even tried to attack, or occasionally through one time pads, painful to use but impenetrable when handled properly.

1942 witnessed a transformation in the nature and the balance of cryptologic power. The British, running a marathon, left Axis sprinters gasping in their wake. British cryptanalysis achieved unprecedented power, moving the discipline from the era of craftsmen to the industrial age. Their cryptography overcame dire problems to achieve the highest standards on earth. In this sphere, however, American systems and procedures remained infantile. Bonner Fellers constantly warned the War Department of elementary errors in its use of the Black Code, yet it failed to change its ways (or an obviously endangered system). Such vulnerabilities were the greatest weakness in allied cryptology during 1942. Britain found the United States hard to move on the matter, because it raised the obvious question of how Whitehall possibly could know American systems were vulnerable. Too much emphasis on the real answer, that Britain had been reading American codes steadily since 1915, was impolitic. During these early days, the longevity of the special relationship in cryptology was unclear. By 1944, United States Navy (USN) cryptanalysts were investigating whether they could break Typex. Though they concluded the task was beyond them, British intelligence authorities believed that system was vulnerable to their allies. They in turn pursued a new generation of cipher machine specifically to secure British traffic against American codebreakers. They refused to trust to Churchill's proposal that he and Roosevelt should sign "a self-denying ordinance by which on a gentlemen's agreement both the British and American Governments would refrain from trying to penetrate each other's ciphers…I have not authorised the decoding of an American message since they came into the war with us, and I told the President so. I have little doubt they would say the same". The Cabinet Secretary, Norman Brooks, doubted that any such arrangement would have "a very lasting validity in technical circles."[17] Only after the war did the two governments develop the mutual trust needed to rely on a gentlemen's agreement. That they have honoured it, is the most central and impressive aspect of their special relationship. In any case, given these circumstances, during 1942 the Bonner Fellers case offered a simple solution to the

[16] John Ferris, "The British 'Enigma': Britain, signals security and cipher machines, 1906-1953," in Ferris, *Intelligence and Strategy*, pp. 156-60.

[17] Ibid., p 170.

problem that poor American cryptography posed to allied supremacy in signals intelligence. The incident embarrassed Washington into raising its standards, giving cryptography the attention it required and deserved, making the matter legitimately one of joint allied concern, and ensuring that Britain would freely help the United States to develop its power in all forms of cryptology. Such improvements in cryptography aided the allied victory in signals intelligence as much as did the development of Ultra.

The Bonner Fellers' case shows how the intelligence record can affect judgments even about the best known of events. It also illustrates the complexities in the relationship between intelligence and action, and the need for nuance in expressing an understanding of that connection. Intelligence does not normally serve as the decisive factor in decisive actions. It can be irrelevant. It can give one actor or army a major and one-sided advantage, as with Rommel in June 1941, January 1942 and February 1943. It also can affect events in more peculiar ways. Thus, before the battle of Gazala, despite possessing strong sources, each side misunderstood key elements about the other, British capabilities in the case of Rommel, his intentions for the enemy.[18] Here, the significance of intelligence was that both sides had an opportunity to gain an advantage from it, but did not, instead taking inferior or mistaken decisions. Finally, in rare cases intelligence strikes like lightening, making events fundamentally different than they otherwise would have been, especially by allowing some actors to execute their intentions largely as they wish (which is both harder and rarer than many might think). Since everything the USN did at the battle of Midway stemmed from accurate and timely warning, without American intelligence, that clash would have been entirely different. The Pacific Fleet, dashing straight from Pearl Harbor into a Japanese trap, might have been wrecked in a one sided defeat, or else stayed where it was, precluding any battle from happening at all. Instead, surprise, fortune, and boldness in the battle produced an American triumph. At Jutland in 1916, conversely, where intelligence played the same role for the Royal Navy as it did for the USN at Midway, God was not an Englishman, though in this case the Germans combined tactical victory with strategic defeat. [19] Intelligence played the same role in these battles—the difference between them was chance. Again, the British deception campaign that misled the Germans in 1944 depended on Ultra. Without these edges in intelligence and deception, the Germans might have deployed their forces in France so as to pin the allies far longer in their beachhead at Normandy, or else to force postponement of the attack.[20] The effect of intelligence is variable. Often it is important. Hence, even if it was irrelevant to any instance of diplomacy or strategy, one cannot be sure one knows

[18] F.H. Hinsley, Thomas, E.E., Ransom, C.F.G. and Knight, R.C., *British Intelligence in the Second World War, Its Influence on Strategy and Operations, Volume 2* (HMSO, London, 1981), pp. 341-98; Ralph Bennett, *Ultra and Mediterranean Strategy, 1941-1945* (Hamish Hamilton, London, 1989).

[19] Gordon Prange, *Miracle at Midway* (Penguin, New York, 1982).

[20] Ferris, J.R., "Agreed Texts: Intelligence, Military Rationality, and the Planning for Operation Overlord," in John Buckley (ed), *Overlord Sixty Years Later* (Routledge, 2006).

the whole story without understanding intelligence, as regards both the evidence on specific instances, and the issue of its general effect.

Nor did this influence end with the Second World War. The intelligence relationship which emerged during that conflict marks international affairs to the present day.[21] During the first decade of that relationship, the British were the leader, a close second during the next one, and a major if subordinate player thereafter. The significance of American intelligence fluctuated during 1942-50, but rose steadily between 1950-1975. That special relationship was not a simple matter. It turned on an alliance between the military forces of the English speaking countries and especially their signals intelligence services: the National Security Agency was, and is, more enthusiastic about the matter than the Central Intelligence Agency. That relationship, and intelligence, were central to power and policy during the cold war. Knowledge and ignorance of these issues matter to historians. One can fully reconstruct the logic behind decisions only by examining the data available to decision makers. That intelligence record mirrors their time, illuminating individuals, policies, and international systems in clear, often startling, ways. It points to the interaction between information and attitudes, and their relationship to ideology and perception, which are the true hidden dimension of diplomacy. When that evidence on these issues finally is available, it will illuminate how and why specific decisions were made, and by whom, and how rationally; and the characteristics, and the attitudes toward risk, opportunity, uncertainty and statesmanship, of leading decision makers; not to mention hidden elements of the international structure of power and policy during the cold war.

An ideal set of records for the influence of communications intelligence on diplomacy would include evidence on all information, on how it was assessed in whole and part, and influenced action. Such a record rarely exists: communications intelligence usually is assessed apart from other sources; files on intelligence are collected in one series, those on policy in another; the motivations for action often are undocumented, and their relationship with intelligence can be reconstructed only through a case by coincidence resting on circumstantial evidence, on tracing similarities between a source's information and the ideas of its consumer. None the less, whenever the communications intelligence record emerges, one can determine fairly well how it affected operations and bargaining. Standard security procedures make its effect on other forms of diplomacy harder to reconstruct. Officials at the State Department and the Foreign Office saw communications intelligence in highly controlled environments, where they could read but not copy material, and were cautioned not to refer directly to it; so too politicians, though they were less bound by bureaucracy. Many diplomatic actions are too broad to betray how intelligence affected them. The normal record will reveal the influence of communications intelligence only on some parts of diplomacy. Its role in other areas can

[21] The fundamental work on the rise of the Anglo-American intelligence relationship is Bradley Smith, *The Ultra-Magic Deals and the Most Special Secret Relationship, 1940-1946* (Presidio Press, Shrewsbury,1993).

be determined only through oral interviews conducted after the fact with veterans. Scholars of diplomacy should appreciate the value of raising such issues when interviewing old hands, but only the official diplomatic and intelligence historians, through their programmes of interviews with retirees, can address this issue thoroughly. Their standard format does ask diplomats to comment on any case they can remember where intelligence affected their work, but the more detailed the questions, the more useful the answers. If the official historians act now, with diplomats and the intelligence officers who briefed them, they will prevent weaknesses in the record from marring reconstruction of the impact of cryptanalysis on foreign policy during the cold war. They stand custodian for all of us; they merit our thanks, in advance.

The evidence probably will be released at some point in the next fifty years. At present, it is available only in fragments, but enough exists to be useful. Experience with a similar area, the study, during a time when the records were withheld, of how codebreaking affected British policy during the interwar years, shows that one can find material which governments are trying to hide, by looking at topics where references to communications intelligence cluster and are hard to conceal, such as signals security and communications systems, and transcripts of telephone conversations between senior decision makers, or of their discussions during crises. One can gain from leaks through interviews or mistakes by the weeders, as when records from the Naval Security Group, mistakenly and temporarily released into NARA, included much material on diplomatic communications intelligence during the early cold war. Knowledge of the procedures and people involved in the circulation of communications intelligence to decision makers is a lever for further discoveries. Private papers offer fruitful opportunities. Nor does everything missing from the record have a need to be known. Each day during the cold war, the main task of signals intelligence was to say, on the basis of thorough study of low level military traffic, that World War Three would not start today. The voluminous records on these topics are less important now than they were then.

The main story is known about the relationship between signals intelligence, and the military and strategic sides of the cold war. Given its nature, our ignorance of many important details matters less than does our understanding of the whole and several of its parts. A small but able literature shows military and strategic historians of the cold war how they can start to integrate intelligence into their work.[22] This effort was enormous. The signals intelligence services of that era, the greatest in history, were linked in alliances of unprecedented sophistication and locked in constant struggle. Every day,

[22] John R. Schindler, *A Dangerous Business, The U.S. Navy and National Reconnaissance During the Cold War* (Center for Cryptologic History, Ft. George Meade, MD: National Security Agency, Center for Cryptologic History, 2004); Michael Herman, J. Kenneth McDonald and Vojtech Mastny, *Did Intelligence Matter in the Cold War?, (Institute for forsvarsstudier, Norwegian Institute for Defence Studies* Oslo, 2006); Michael Goodman, *Spying on the Nuclear Bear: Anglo-American Intelligence and the Soviet Bomb* (Stanford University Press, Stanford, 2007); Christopher Ford and David Rosenberg, *The Admiral's Advantage, U.S. Navy Operational Intelligence in World War II and the Cold War* (Annapolis: Naval Institute Press, 2005).

hundreds of thousands of their members, east and west, monitored each other's capabilities and intentions and provided tens of thousands of reports; countries like Norway or Canada had agencies larger than any before 1938, though middle powers like France or Germany cared less about this matter than the USSR or Scandinavian states. American commanders in Vietnam were poured signals intelligence with their orange juice, although their enemy probably gained more from this source, because United States' forces relied more heavily on radio, and had poor signals security. Signals intelligence and imagery also were fundamental to the strategy of both sides and the structure of the cold war. They eliminated ignorance, uncertainty and alarm about nuclear forces and made the balance of terror stable. They focused on supporting millions of soldiers in a world wide competition against a peer, with the trump suit being the collection of data on strategic issues through highly technical means. Where the west developed a harmonious fusion of imagery and signals intelligence, intercept stations in Cuba may have provided 70% of Soviet intelligence on American strategic forces.[23] All these strengths came at a cost. Intelligence and strategic bureaucracies could not handle the host of material they received, true, but often trivial in quality and overwhelming in quantity. This produced bewilderment alongside illumination.

Scholars addressing the military and strategic role of signals intelligence during the cold war confront many problems which are known, or known to be unknown, but fewer of the "unknown unknown" variety than is true of international historians. The latter suffer from sparse records about communications intelligence and diplomacy, while evidence about one issue in their field cannot easily be generalized to another. Variations, every day, in the particular details of access to and the value of information, and in the nature of actors and problems, reshape normal diplomacy and fundamentally affect crises. Even more, communications intelligence affects most forms of foreign policy in a more complex way than it does military operations (or diplomatic bargaining). In operations, the classic consequence of intelligence is to enable you to concentrate your strength against an enemy's weakness, or to shelter your vulnerabilities from its power; in bargaining, it is to let you know the best deal you can achieve and how to get there, which cards to play, or not. In diplomacy as a whole, the classic consequence of intelligence is to let you know which competitor you can or should influence by what means. In that realm, intelligence guides influence, rather than power. It is exercised through actions like signals or manipulation, by finding means to warn someone from a move your intelligence shows it is contemplating, or by disrupting its efforts to form an unwelcome combination. Even more, diplomatic cryptanalysis generally provides first rate material on second rate issues, and second rate material on first rate issues. It rarely offers unambiguous statements by chief authorities as to what they will do on a specific matter at a given date, but rather indicators of that matter, drawn from the views of middle-level officials whom one uses as a proxy for that matter—even though what they really are

[23] Desmond Ball, "Soviet Signals Intelligence: Vehicular Signals and Operations," *INS* 4:1, 1.89, pp. 5-27; Desmond Ball and Robert Windrem, "Soviet Signals Intelligence (Sigint): Organization and Management," *INS* 4:4, 10.89, pp 621-59.

trying to do is to influence the latter, who may have objectives which they deliberately are hiding from their subordinates. Statesmen rarely bare their hearts by telegraph or telephone or radio; often they do not know their own mind until they have to act on it. Again, where military operations involve a struggle between two opponents, diplomacy (including bargaining) often is a multilateral matter. In such cases, intelligence merely is one factor in a game with many players, where intentions and effects become tangled. The best stroke possible against one rival may alarm a third and lead them to bump a fourth into deflecting one's shot—perhaps towards one's net. Diplomatic intelligence often leads statesmen not to take specific actions that were carried into effect—thus letting one judge how information affected actions—but also to favour policies that never were realized, or not to take any actions at all. In diplomacy, more than war, to wait is to act, with consequences perhaps greater than from any stroke of policy. In foreign policy, single actions rarely revolutionise a system, meaning that unexpected results are to be expected—often counter-productive ones. Communications intelligence has a monogamous marriage with military operations; its relationship with diplomacy is more like polymorphous perversity.

A conservative analysis from known facts illustrates the scale of diplomatic cryptanalysis during the cold war. When properly used and not physically compromised, leading cryptographic systems after 1945 should have been impossible to break—just like Enigma. But all such systems were vulnerable to black bag jobs, like surreptitiously copying cryptographic hardware and software, while until 1970 many states used machines that could be solved through cryptanalysis, including Enigma. The techniques of Bletchley Park had a long shelf life. States also placed "Trojan Horses" in cryptographic equipment produced by firms under their legal control. Communications intelligence was acquired by ancillary skills, such as tapping telephones. The KGB bugged every embassy in Moscow, as Britain did Lancaster House, the scene of many negotiations in decolonization, and the United States, the offices of the presidents of South Vietnam and Egypt, the homes of Soviet diplomats throughout the world, and the code rooms of every chancery they could reach.[24] This labour bore fruit. At any point during the cold war, the UKUSA alliance seems to have read many of the important messages of most countries on earth. UKUSA read some diplomatic traffic of 52 states in 1949. Defectors from the National Security Agency (NSA) claimed in 1960 that the United States knew some of the systems of forty countries, including Italy, France, Yugoslavia, Indonesia and Uruguay. Either Stansfield Turner or William Casey, or both, provided this statement by Bob Woodward about the NSA's success in January 1980: "Of the twenty principal target countries, well, in summary it was possible to break some of the codes some of the time, but not all of them all of the time....There were dozens of other countries that were not primary targets and the NSA could break their codes." Officials in Washington the morning after, regularly received solutions of the reports by foreign ambassadors of

[24] John Ferris, "Coming in from the Cold War: The Historiography of American Intelligence, 1945-1990," in Michael J. Hogan (ed.), *America and the World, The Historiography of American Foreign Relations Since 1941* (Cambridge, 1996).

cocktail conversations the night before.[25] UKUSA, however, had limited success against its main adversary, because of the defensive power of advanced cryptographic systems and victories by spies against signals intelligence in the early cold war. In 1946-48, American attacks on NKVD traffic, VENONA, cracked open the great Soviet mole networks of that era, until British traitors destroyed that access. Meanwhile, an American traitor, William Weisband, wrecked a second Ultra which British cryptanalysts had deployed against Soviet cipher machines.[26] Between the 1950s and the 1970s, UKUSA tapped Soviet cables carrying military traffic in low grade systems in Europe and at sea, and occasionally solved its high level traffic, and that of other communist states. Meanwhile, Soviet signals intelligence was formidable. Though perhaps less good than its western rivals in pure cryptanalysis, as ever, it aided that work through superb espionage. Its best known success, penetration of USN cryptographic systems through the Walker spy ring, might have mattered in case of any war. In 1967, the KGB claimed that "as a result of decoding and deciphering work we read communications in 152 cipher-systems of 72 capitalist countries; in 1967 we broke 11 cipher-systems, and decoded 188,400 telegrams overall." These 11 systems stemmed from a programme of "special measures" which acquired documents from embassies in Moscow. Lesser powers also acquired much material to meet their own needs. Thus, the Dutch read much diplomatic traffic of western European and third world states, and many messages of foreign firms.[27]

These facts enable some hypotheses. After 1945, the best cryptographic systems rarely were read, though they remained vulnerable to espionage. Adversaries also could intercept important traffic carried by lesser systems on one's internal communications, whether Soviet submarine cables or microwave signals in Washington. Communications intelligence provided more diplomatic information than before, but less often from the major traffic of large powers—it yielded even more first rate material on second rate issues. No longer did strong states regularly defeat each other, though this sometimes did happen. Thus, apparently, French codes were weak until 1970, while the United States gained in a classic fashion from diplomatic communications intelligence against the USSR between 1970-74. No doubt other such instances will become clear in time. Otherwise, diplomatic codebreaking had two main forms. The first was attack by strong states on weak ones, especially in Africa, Latin America and the Middle East. This material was useful in itself, given the dynamic relations between such states and their significance to regional and world politics, and it also illuminated great power politics. Secondary states with weak cryptography but well informed ministers can inadvertently provide excellent

[25] Ibid. pp. 102-5.

[26] Robert Louis Benson and Michael Warner (eds), *VENONA, Soviet Espionage and the American Response, 1939-1957* (Washington, 1996) and Matthew Aid, "The National Security Agency and The Cold War," in Aid and Wiebes, Secrets, pp. 35.

[27] Raymond Garthoff and Amy Knight (eds), "The KGB's 1967 Annual Report," *The Cold War International History Project*, No 10, March 1988, p 218; Cees Wiebes, "Dutch Sigint During the Cold War, 1945-94," in Aid and Wiebes, *Secrets of Sigint*, pp. 243-84.

commentary on every great power to every other one. The second form is more peculiar. The cold war coalitions were stable. The signals intelligence struggle between them was focused on strategic matters. The members of these coalitions concentrated their diplomatic communications intelligence against the people with whom they conducted most diplomacy, their allies, and on the issues where they most competed, bread and butter matters of diplomacy and economics. Such material, often available through simple means, like telephone intercepts, was easier to acquire than high diplomatic intelligence across the great divide. Within these coalitions, diplomatic codebreaking shaped minor rivalries and alliance management by the powers most responsible for and informed about such matters.

International historians already can make some specific comments on the liaison between codebreaking and diplomacy during the cold war, and its offspring. In most cases, however, they merely can know that they do not know a dimension to their topics, which will shape many of its aspects, sometimes in a dramatic fashion, always in one that cannot be determined for certain until the records are available. International historians should remember that during that period, intelligence consisted not merely of coups and U-2s, but also of a cryptanalytical background to foreign and strategic policy, which affected decision making as much as did any other source, secret or official, but rarely in a simple way. Here they can be guided by the few able scholars who have illuminated the influence of communications intelligence on diplomacy and strategy; others, like Matthew Aid and Richard Aldrich, are conducting major projects in the area.[28]

Historians of the cold war are converging on a combination of topics, a leading edge of documents, and a gaping hole in the evidence. This locale should be seen as an intersection, rather than a one way street. Intelligence historians know no more (or less) about the matters at hand than do military, diplomatic, international and strategic historians. Only by reading and working with each other, can members of these various

[28] James Bamford *The Puzzle Palace, Inside the NSA, America's Most Secret Intelligence Agency* (Boston, Houghton-Mifflin, 1982) and *Body of Secrets: Anatomy of the Ultra-Secret National Security Agency* (Anchor Press, New York, 2002); Robert Hanyok, *Spartans in Darkness: American SIGINT and the Indochina War, 1945-1975*. Ft. George Meade, MD: National Security Agency, Center for Cryptologic History, 2002, [http://www.fas.org/irp/nsa/spartans/] ; Matthew M. Aid and Cees Wiebes, eds. "Secrets of Signals Intelligence during the Cold War and Beyond," *Intelligence and National Security* , 16/1, (Spring 2001); Cees Wiebes, Intelligence and the War in Bosnia, 1992-1995, (Transaction Press, Rutgers, 2003); Matthew Aid, "KGB Sigint during the Cold War", Karl de Leeuw and Jan Bergstra," *The History of Information Security* (Elsevier, Amsterdam, 2007); David Kahn, "Soviet COMINT During the Cold War," Cryptologia, 22/1, pp 1-28; David A. Hatch and Robert Louis Benson, *The Korean War: The SIGINT Background* (CCH, 2000), http://www.nsa.gov/history/histoooo07.cfm. For examples of critical studies of diplomatic intelligence, cf. Ferris, J.R., Andrew Webster and Peter Mauch, "British SIGINT decrypts on the London Naval Conference, 1930," in R. Gerald Hughes, Peter Jackson and Len Scott (eds), *Exploring Intelligence Archives, Enquiries into the Secret State* (Routledge, London, 2008), pp. 41-58, and John Ferris, "Image and Accident: Intelligence and the origins of the Second World War, 1933-1941," in John Ferris, *Intelligence and Strategy* pp. 99-137.

sub-disciplines achieve their common task: to understand the relationship between intelligence, power and policy during the cold war. Good luck and good hunting.

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