The evolution of the British secret service and the role of Alastair Guthrie Denniston

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> Being my father's son seemed to be such an opportunity. I knew enough of his cryptographic work during and between the two world wars to guess there would be valuable and important books to be written about the activities of the Government Code and Cypher School... However, while he was still alive I knew he would forbid it. So I told a friend at Secker & Warburg — David Holt — a little about Bletchley Park. He made a few enquiries and within days GCHQ (the successor of GC&CS) had descended on my father's retirement cottage asking him how he, the most discreet of all civil servants, could have become a security risk in his old age. Remarks were made about withholding his pension. He was furious, I was apologetic.[1]

From Robin Denniston's quote, related to activities of his father Alastair Guthrie Denniston (AGD) within Government Code and Cypher School (GC&CS),[2] it is apparent that determining somebody's true role in any secret intelligence service might not always be a fully attainable task as GC&CS, given its peculiar nature, will never yield all of it secrets.[3] However, confronting a large number of different sources should provide an overall better picture of both GC&CS and Alastair Denniston's role within it.

The first part this paper will generally follow a period from 1919 to 1930, thus, elaborating on the establishment of GC&CS, obstacles Alastair Denniston had to face and successes he achieved in this period, especially in the field of internal co-operation and effectiveness. The second part will mostly focus on the period between 1930 and 1942. It will deal with an expansion of GC&CS, beginning with a pre-war recruitment process and management difficulties linked to it. The last part will then elaborate

1 DENNISTON, R., *Three Kind of Hero: Publishing the Memoirs of Secret Intelligence People*, in: Intelligence and National Security, Vol. 7, 1992, No. 2, p. 112.

2 United Kingdom's intelligence and security organization established in 1919 in order to provide signals intelligence until 1946 when it was transformed into the Government Communication Headquarters (GCHQ).

3 GREY, C. — STURDY, A., *The 1942 Reorganization of the Government Code and Cypher School*, in: Cryptologia, Vol. 32, 2008, No. 4, p. 322.

on GC&CS reorganization in 1942 and on Denniston's role in establishing relations between US and UK intelligence services. The paper will conclude by highlighting a complex, yet mostly positive, role that AGD played in the development of GC&CS.

After the First World War, during which British cryptography was practised in two sections — 40 OB (Room 40)[4] and MI 1B,[5] the Director of Naval Intelligence (DNI), Admiral Hugh Sinclair, was given the task of forming one permanent section mostly based on the remnants of both 40 OB and MI 1B. Consequently, on 1 November 1919 GC&CS was established with two main functions: a public one and a secret one. The public function was "to advise on the security of codes and cyphers used by all Government departments and to assist in their provision", and, at the same time, based on a secret directive, GC&CS was supposed "to study the methods of cypher communication used by foreign powers".[6]

Alastair Denniston, in 1919, was selected, mostly due to his previous wartime experience from Room 40, to lead the country's peacetime cryptanalytical effort in the form of GC&CS.[7] As a candidate for this post he was strongly promoted by Winston Churchill who in fact made Denniston's charge over GC&CS an ultimatum. In one of his letters Churchill wrote "We[8] should only consent to pool our staff with the War Office on condition that Commander A. G. Denniston is placed in charge of the new department… Denniston is not only the best man we have had, but he is the only one we have left with special genius for his work… If the War Office people are not willing to accept this condition, we should prefer to retain our staff in the Admiralty."[9] Therefore, there can be no doubt that in 1919 AGD was perceived as a competent and reliable man, suitable for leading the newly formed GC&CS.

From the very outset, however, Denniston's effort to further develop British cryptanalytical capabilities was significantly hampered by the Cabinet's decision to use some of the decrypted messages publicly as political tools. Mainly Soviet decrypts offered Britain an insight into Soviet foreign policy, moreover, they provided evidence of Soviet financial support to leftist extremists in England and of attempts to subvert India. Consequently, in August 1920, British Prime Minister Lloyd George allowed some of the decrypts to be published in the press, hoping to embarrass Soviet government into more acceptable behaviour. As a result, by December 1920 all Soviet radio traffic disappeared until March 1921 when Soviet transmitters resumed their operations in a more secure cypher. Denniston was appalled by the government's de-

4 Section in the British Admiralty formed in 1914 with primarily focus on German naval interception and cryptanalysis, also known for its decryption of Zimmermann telegram.

5 Subsection of British Military intelligence focused primarily on German military interception and cryptanalysis.

6 DENNISTON, A., *The Government Code and Cypher School between the Wars*, in: Intelligence and National Security, Vol. 1, 1986, No. 1, p. 49.

7 HINSLEY, H., *Denniston, Alexander Guthrie [Alastair]*, available in: http://www.oxforddnb.com/view/printable/32783).

8 Admirality.

9 DENNISTON, R., *Thirty Secret Years, A.G, Denniston's work in signal intelligence 1914–1944*, Trowbridge 2007, p. 48–49.

cision to publish incriminating decrypts, although GC&CS broke new Soviet codes within a matter of weeks. New decrypts were then forwarded to the cabinet with a cautionary note: "if intelligence is used for publicity it will be lost to us." Nevertheless, by 1923 the British government again intentionally compromised the decrypts in a note of protest to the Soviet foreign minister, thus, once again, also compromising the work of GC&CS.[10] As a result, the Russians started to use new type of cypher[11] which took GC&CS several months before it succeeded in diagnosing it.[12] Finally, in 1927, the British government, partly to cover its embarrassment over the Arcos Raid[13] incident, used a selection of Soviet intercepts in order to justify its decision to break off diplomatic relations with Moscow. Consequently, the Soviet Union decided to adopt the theoretically unbreakable "one-time pad"[14] for its diplomatic traffic. Christopher Andrew underlines that in regard to the 1927 incident, Denniston wrote bitterly that Baldwin's government had deemed it "necessary to compromise our work beyond question". Furthermore, Andrew argues that, as a result of this, British cryptanalysts were unable to successfully decrypt hardly any high-grade diplomatic traffic for the next twenty years, although GC&CS continued to have some success with the communication of the Communist International.[15] The publication of Soviet decrypts in 1920, 1923 and 1927 ultimately proved to be counter-productive and, moreover, they led Denniston to over-emphasize the preservation of the secrecy of GC&CS's existence.[16] As a result, already in 1923 when the Services[17] wanted GC&CS to approach university mathematicians in order to form a cadre of cryptanalysts for

10 WEST, N., *The Sigint Secrets: The Signal Intelligence War, 1900 to Today*, New York 1988, p. 101–104. Found in PETERSON, M., *Before Bourbon: American and British COMINT Efforts against Russia and the Soviet Union before 1945*, pp. 10–11, available in: https://www.nsa.gov/public_info/_files/cryptologic_quarterly/before_bourbon.pdf.

11 'Long additives' were introduced. For more on long additives see J.H.Tiltman, *Experience 1920–1929*.

12 TILTMAN, J., *Experiences 1920–1939*, (available in: https://www.nsa.gov/public_info/_files/tech_journals/experiences.pdf), s. 6.

13 Was a raid (12 May 1927) on the offices of a British-registered Soviet trading company, Arcos Ltd., on suspicion that the company was a front for Communist subversion. However, no evidence of subversion was found. Found in PALMOWSKI, J., *A Dictionary of Contemporary World History*, available in: http://www.oxfordreference.com/view/10.1093/oi/authority.20110803095422443.

14 One-time pad comprises pages of random numbers, copies of which were used by the sender and receiver of a message to add and remove extra layers of encipherment. One-time pads used properly only once are unbreakable. Found in BENSON, R., *The Venona Story*, available in: https://www.nsa.gov/about/_files/cryptologic_heritage/publications/coldwar/venona_story.pdf

15 ANDREW, C., *Bletchley Park in Pre-War Perspective*, in: ERSKINE, R. — SMITH, M. (eds.), Action this day, Chatham 2001, p. 4

16 FERRIS, J., *Whitehall's Black Chamber: British Cryptology and The Government Code and Cypher School, 1919–1929*, in: Intelligence and National Security, Vol. 2, 1987, No. 1, p. 60.

17 Admiralty, the Army, and the Royal Air Force. Found in WEST, N., *Historical Dictionary of British Intelligence*, Lanham 2005, p. 109.

wartime expansion, GC&CS rejected it on the grounds that it would make organization too publicly known.[18] Such an erroneous approach toward mathematicians was, however, later rectified by Denniston in 1938.[19]

Further development of British cryptanalytical capabilities was, however, also significantly hampered by the lack of funding that GC&CS was receiving. In fact, GC&CS was not merely influenced by the Geddes axe,[20] but according to Denniston's own words "beyond accommodation and salary GC&CS had no financial status; it became in fact an adopted child of the Foreign Office[21] with no family rights, and the poor relation of the SIS,[22] whose peacetime activities left little cash to spare".[23] Ferris argues that despite Denniston ably defended and promoted GC&CS's interests he was treated only as technical expert with just a small voice in actual policy. Consequently, the overall unwillingness to allocate and provide more financial resources to GC&CS had significant cumulative effects on British cryptology.[24] For instance, between 1929 and 1930 Britain decided not to develop a cypher machine as the Treasury halted all research into developing such devices.[25] In any case, it should be noted that Denniston himself expressed a great interest in developing such a machine and even tried to further explore its potential and possibilities for GC&CS. For example, John Tiltman, a close friend of AGD and a cryptographer at GC&CS, was asked by Denniston between the years 1931 and 1932 to visit the British Tabulating Machinery Company to investigate the work they were conducting on machines in case they might have a cryptologic application, particularly in the field of sorting large volumes of data.[26]

In spite of the Cabinet's tendencies to use several decrypted messages publicly as political tools and despite the financial constraints imposed upon it, GC&CS was, between the years 1919 and 1930, as able as, and possibly superior to, any other crypto-

18 AIR 2/246. S. 22679. Report of the Inter-Service Directorate Committee, 9 April 1923. Undated memorandum by the GCCS, circa July 1923, passim, in: FERRIS, J., *Whitehall's Black Chamber: British Cryptology and The Government Code and Cypher School, 1919–1929*, in: Intelligence and National Security, Vol. 2, 1987, No. 1, p. 60–61.

19 ANDREW, C., op. cit., p. 8.

20 Committee chaired by Sir Eric Geddes focused on reduction of public expenditure. Found in MCDONALD, A., *The Geddes Committee and the Formulation of Public Expenditure Policy, 1921–1922*, in: The Historical Journal, Vol. 32, 1989, No. 3, p. 643.

21 In 1922 it was decided to transfer GC&CS from the Admiralty to the Chief Clerk's Department of the Foreign Office. Found in DENNISTON, The Government Code..., p. 49–50.

22 Secret Intelligence Service, created in 1909 as the Foreign Section of the Secret Service Bureau. Known since 1916 as MI6, the organization's military intelligence designation. Found in WEST, Historical Dictionary..., p. 474.

23 DENNISTON, The Government Code..., p. 50.

24 FERRIS, op. cit., pp. 58–59.

25 WO 32/3057. Minute by S.D.6., 2 Oct. 1929, in: FERRIS, J., *Whitehall's Black Chamber: British Cryptology and The Government Code and Cypher School, 1919–1929*, in: Intelligence and National Security, Vol. 2, 1987, No. 1, p. 69.

26 NSA. *Brigadier John Tiltman A Giant among Cryptanalysts*, available in: https://www.nsa.gov/about/_files/cryptologic_heritage/publications/misc/tiltman.pdf, 14.

logical organization in the world.[27] This was indeed achieved mostly because of Denniston. Moreover, during this period AGD managed to turn GC&CS into an effective organization because he managed to eradicate within its structures what he regarded to be 'official jealousy' which had, from his point of view, prevented any collaboration between naval (40 OB) and military (MI 1B) cryptanalysts from October 1914 to Spring 1917. In fact, according to Christopher Andrew, within a few years of its foundation GC&CS achieved successful coordination of diplomatic and service cryptanalysis under overall Foreign Office control. He continues by arguing that such co-ordination, equaled by no other major Sigint[28] agency abroad, was one of the main secrets of Bletchley Park's[29] success. The success of Denniston's GC&CS was, at this time, further confirmed by Churchill's personal description of Sigint, in 1924, as more important in the making of foreign and defense policy than "any other source of knowledge at the disposal of the state".[30]

Soon after GC&CS was established and as the organization was becoming more proficient in breaking foreign codes and cyphers the need for new staff, cryptanalysts and overall expansion emerged. In 1923 GC&CS stated that to enlarge itself greatly and rapidly would prove to be futile at that time.[31] Consequently, the growth of personnel in the period between 1919 and 1935 occurred in a very slow and modest fashion. In 1919 GC&CS employed 28 clerical and 25 cryptological staff and later managed to maintain about 80 to 90 personnel, including 30 cryptologists during the 1919–35 period.[32] It was not until the autumn of 1935 that the Treasury, after Denniston's endless pleas for an increase in staff to match rising military activity,[33] permitted to recruit an additional thirteen clerks, albeit only on a temporary basis of six months at a time. During 1937, the Treasury agreed to an increase in permanent staff, again mostly because of Denniston's remarks that GC&CS's personnel was only able to cope with the growing workload by working overtime.[34] Unfortunately, in the light of a rapid increase in the volume of German wireless transmissions, particularly in Enigma[35] but also in the lower grade codes, GC&CS was still in desperate need for more personnel.[36] However, it was not merely a question of budget and numbers anymore. GC&CS was also failing to rise to

27 FERRIS, op. cit., p. 80.

28 Signals Intelligence — gathering of intelligence based on interception of signals.

29 A country house in Buckinghamshire and home of GC&CS since 1939. Found in GCHQ, *WWII: Bletchley Park*, available in: http://www.gchq.gov.uk/history/pages/wwii-bletchley-park.aspx.

30 ANDREW, op. cit., pp. 10–12.

31 AIR 2/246. S. 22679., *Report of the Inter-Service Directorate Committee*.

32 FERRIS, op. cit., p. 61.

33 Uncertain situation in Spain and Ethiopian (Abyssinia) crisis are explicitly mentioned.

34 HODGES, A., *Alan Turing: The Enigma*, London 1992, p. 147.

35 Cryptographic machine used by Germany which was believed to be unbreakable. It based its cypher capabilities on series of wired rotor wheels and plugboard. Found in WILCOX, J., *Solving the Enigma: History of the Cryptanalytic Bombe*, available in: https://www.nsa.gov/about/_files/cryptologic_heritage/publications/wwii/solving_enigma.pdf.

36 HINSLEY, H., *British Intelligence in the Second World War, Its influence on Strategy and Operations*, London 1979, pp. 54–55.

the mechanical challenges imposed by their foreign counterparts, the Germans in particular.[37] Consequently, Hugh Sinclair,[38] "convinced of the inevitability of war" during 1937 initiated the first major expansion plans for the GC&CS. In fact, he instructed Denniston, being the operational head of GC&CS, to identify "the right type of recruit" that could potentially reinforce GC&CS "immediately on the outbreak of war".[39] Denniston, following the example of his World War I chiefs, decided that Cambridge and Oxford Universities would represent his first source of recruits.[40] Consequently, a large network of contacts for potential candidates was mobilized in a recruitment process that was characterized as being very informal and personalized.[41] Smith argues that previously Denniston had virtually no resources with which to improve GC&CS situation, but, with Sinclair's backing since 1937, he toured universities looking for mathematicians and linguists to work on Enigma cyphers, and as a result the situation began to change for the better. This, he argues, showed far more prescience than either of this men had been credited with.[42] By breaking with misguided precedent — not recruiting mathematicians for cryptanalytical purposes, which was originally established in the First World War — Denniston succeeded in bringing into GC&CS such brilliant mathematicians as Alan Turing and Gordon Welchman, both of whom made a significant contribution to breaking Enigma. Very soon the first mathematicians made themselves indispensable for GC&CS and, as a result, the recruiting process was rapidly extended to people from this field.[43] In August 1939, only a few weeks before war was declared, GC&CS moved to its new home in Bletchley Park, mainly for security reasons but, also, because of its convenient location, halfway between Oxford and Cambridge, and the future need for more space.[44]

The beginning of the Second World War and the sudden rapid growth of both GC&CS's personnel and its needs created new management demands and challenges to which, however, Denniston struggled to respond appropriately. GC&CS expanded with exponential rapidity over the first eighteen months of the war.[45] In fact, it had quadrupled in size between late 1939 and early 1941 when it even reached a staff of 900 personnel.[46] According to Robin Denniston AGD was not, however, a man who found leadership easy and could not play a commanding role well amongst the bureaucrats and politicians with whom he had to deal.[47] Unfortunately, it seemed that, at its time

37 HODGES, A., op. cit., pp. 147–148.
38 By now the chief of Secret Service.
39 JEFFERY, K., *MI6 the History of the Secret Intelligence Service 1909–1949*, London 2011, p. 317.
40 WELCHMAN, G., *The Hut Six story: breaking the Enigma codes*, Cleobury Mortimer 1997, p. 9.
41 JEFFERY, MI6 the History..., p. 317–318.
42 SMITH, M., Introduction to: *From Amateurs to Professionals: The GCCS and Institutions building in Sigint*, in: ERSKINE, R. — SMITH, M. (eds.), Action this day, Chatham 2001, p. 386.
43 ANDREW, pp. 8–10.
44 WELCHMAN, G., op. cit., pp. 9–10.
45 JEFFERY, MI6 the History..., p. 745.
46 DAVIES, P., *From Amateurs to Professionals: GC&CS and Institution Building in Sigint*, in: ERSKINE, R. — SMITH, M. (eds.), Action this day. Chatham 2001, pp. 395–397.
47 DENNISTON, Thirty Secret Years..., p. 74.

of rapid growth, GC&CS needed precisely that — a leader with the ability to harness further support from bureaucrats and politicians. Without additional resources (not just people but also equipment such as bombs[48] and radio sets), GC&CS's codebreakers knew they would not be able to cope. However, since so few people were allowed to know about the work being done at Bletchley Park Denniston's requests for more resources were rejected.[49] Additionally, AGD was by no means a delegator and instead tried to run GC&CS as a one-man operation long after it should have become a management structure, due to its expanding size.[50] This particular aspect of Denniston's leadership, which proved to be so effective when GC&CS was a relatively small institution, suddenly became a major obstacle for higher effectiveness with the rapid influx of new personnel. Consequently, inter-GC&CS disputes and perceptible disagreements about Denniston's decision-making started to occur. Ralph Bennett, cryptographer at Bletchley Park, recalled: "Denniston [...] found himself in charge of a huge growing organization, a lot of us younger and in some way thinking along different lines, and he got a bit outdated..."[51] Quotes such as this accurately describe the sentiments that were present inside GC&CS in 1941 and early 1942.

The growing dissatisfaction with Denniston's leadership was, between late 1941 and early 1942, considerably highlighted mainly by a so-called "letter to Downing Street" and by the "Hut 3[52] dispute", where the cumulative effect of these incidents served as one of the pretexts for GC&CS reorganization in 1942 through which Denniston was sidelined and moved from Bletchley Park to Berkley Street[53] in London.[54] As GC&CS reached its sources and administrative crisis in the autumn of 1941, which translated itself into an internal management struggle, (driven to some extent by its unmanageable size and by the progressive erosion of traditional institutional boundaries) on 21 October 1941 four leading cryptanalysts[55] decided to make an appeal (a letter to Downing Street) for more financial sources directly to Winston Churchill.[56] Although the letter itself was a success from GC&CS's per-

48 Device constructed in order to help to decipher Enigma's secret messages. Found in ERSKINE, R., *The Poles Reveal their Secrets: Alastair Denniston's Account of the July 1939 Meeting at Pyry*, in: Cryptologia, Vol. 30, 2006, No. 4, pp. 296–299.

49 SMITH, M., *Station X: the codebreakers of Bletchley Park*, London 1998, pp. 79–80.

50 DENNISTON, Thirty Secret Years..., p. 74.

51 SMITH, Station X: the codebreakers..., p. 93.

52 As Bletchley Park rapidly expanded, the need for additional accommodation and space grew. Wooden huts were therefore erected providing a workspace for one or more intelligence units. Hut 3 housed air and military intelligence units. Found in BRUNT, R., *Indexes at the Government Code and Cypher School, Bletchley Park, 1940–1945*, in: American Society for Information Science and Technology, 2004, p. 291.

53 After 1942 GC&CS's reorganization AGD was given a charge over the Sigint section producing diplomatic and commercial intelligence which was moved to Berkeley Street. Found in HOWE, G., *American Signal Intelligence in Northwest Africa and Western Europe*, in: United States Cryptologic History, Vol. 4, 2010, No. 1, p. 158.

54 GREY, C. — STURDY, A., op. cit., p. 324.

55 Namely: Alan Turing, Gordon Welchman, Conel Alexander, Stuart Milner-Barry.

56 DAVIES, From Amateurs to Professionals..., p. 397.

spective as Churchill immediately responded with his famous "Make sure they have all they want...", for Denniston, having been bypassed by his subordinates, it was rather an embarrassment which had detrimental effects on his reputation.[57] This suggested, to some extent, AGD's relative ineffectiveness and incapability to secure the essential funding that GC&CS needed by himself. However, it should be noted that, in 1941, Denniston had been seriously ill and was often absent because of this. Nevertheless, the letter to Downing Street was still an indication that AGD had probably lost confidence of some of his colleagues.[58] The second crucial event, which undermined AGD's leadership, was linked to the dispute in Hut 3 that was ongoing during the latter part of 1941 and early 1942 as the heads of the Hut 3 military and the air advisers attempted to expand their role to include control of all reporting. The atmosphere became so intense to the point that standard output was becoming affected. As a result, Stewart Menzies[59] had to intervene on several occasions. From such an experience he inferred that Denniston was no longer capable of controlling such a rapidly growing organization as GC&CS.[60] Thirdly, and, perhaps, not such a frequently mentioned reason as to why AGD's position within GC&CS became so strongly weakened, was linked to the February 1941 discovery that two key administrative positions, the chief of billeting officer and the 'auntie' to young female secretaries, cryptographers and service people were both assigned to Denniston's personal friends. Robin Denniston underlined that it was inevitably assumed that AGD was out of his depth, despite, as he also argues, those two appointments actually having turned out well.[61] Nevertheless, administration and management reform was at this point only a matter of time.

The reorganization in 1942 has been generally described as a transformation from Denniston's '*laissez-faire*' system into Edward Travis's[62] control regime. However, this proved to be only partly true.[63] It is without question that Travis and the 1942 reorganization triggered an administrative revolution which at least installed the management of intelligence into line with its mode of production.[64] Travis also successfully undertook steps to resolve the quarrels in Hut 3 by appointing Eric Jones[65] as its new Head, but it should not be thought that all endemic problems of Bletchley Park sud-

57 SMITH, Station X: the codebreakers..., pp. 80–81.

58 GREY, C. — STURDY, A., op. cit., pp. 322–323.

59 The head of MI6 since 1939 and, as such, was also the Director of GC&CS (superior to AGD). Found ERSKINE, R. — MICHAEL, S., *Action this day*. Chatham 2001, p. xv.

60 SMITH, Station X: the codebreakers..., pp. 92–93.

61 DENNISTON, Thirty Secret Years..., p. 15.

62 Travis was a deputy to AGD until February 1942, when he became Deputy Director in charge of the services' side of GC&CS. He later became the Director of GC&CS in March 1944. Found in ERSKINE, R., MICHAEL, S., *Action this day*, p. xv.

63 GREY, C. — STRUDY, A., op. cit. p. 325.

64 HODGES, A., op. cit., p. 223.

65 Eric Jones was an air intelligence officer who augmented the Hut 3 system with a team of duty officers who switched the lead of each shift. Found in SMITH, Station X: the codebreakers..., p. 93.

denly disappeared, although the overall situation improved significantly.[66] It should be noted, however, that Travis, in his annual report for 1942, acknowledged all the administrative difficulties but also wrote "... it must be recognized that the new Administration has had the advantage that many of the plans laid under the old regime [i.e. Denniston's tenure] have come to fruition during the past year." Consequently, it is unjustified to simply state that Denniston's system was nothing other than '*laissez-faire*'.[67] Nevertheless, Denniston's relocation to Berkley Street, as mentioned above, can be easily interpreted as a *de facto* demotion after decades of significant work and effort.[68]

AGD's last major contribution to the work of GC&CS, which originated largely from his own initiative, was his ability to lay down the basis for future US-UK Sigint cooperation.[69] Since early 1941 Denniston had been instrumental in promoting full cooperation between GC&CS and both the United States' army and navy codebreaking units.[70] At the same time AGD tried, during his two North American visits, to involve the Canadian side within this cooperation in order to establish USA-Canada three-way liaison with Bletchley Park.[71] It should be noted that such efforts were not trouble-free, especially since GC&CS had concerns about the extent to which information should be shared with the American side as its security practices were regarded as inadequate and could allow the Germans to identify and correct their own cryptologic vulnerabilities.[72] Consequently, for example, when the Sinkov mission[73] arrived at Bletchley Park in February 1941, it believed, mostly because of British secrecy and hesitancy, that key information was in fact withheld from it. Although, following Churchill's approval, the principal secret related to bombes, machines used to break Enigma, was revealed.[74] Such an atmosphere of uncertainty, despite representing a notable obstacle to UK-US Sigint cooperation, was bridged to a large extent by Denniston himself whose effort and personal relations with leading American cryptologists (especially William Friedman, but also Abraham Sinkov and Frank Rowlett) proved to be instrumental as expressed in their letters and correspondence.[75] Moreover, AGD's support for further US-UK Sigint exchange could also be demonstrated by the fact that, for instance, when Tiltman was preparing for a four week visit to American signals intelligence facilities in March 1942, he was instructed by Denniston to effect a complete interchange of all technical knowledge and to pro-

66 GREY, C. — STURDY, A., op. cit., p. 325.
67 (NA/HW 14/67). Found in GREY, C. — STRUDY, A., op. cit., p. 324.
68 GREY, C. — STURDY, A., op. cit., p. 322.
69 WELCHMAN, G., op. cit., p. 10.
70 HINSLEY, H., Denniston, Alexander...
71 DENNISTON, R., Thirty Secret Years..., p. 15.
72 NSA. Brigadier John Tiltman..., pp. 32–33.
73 Sinkov mission was a joint US Army and Navy team that delivered to GC&CS clone of the Japanese diplomatic service's cipher machine along with other codebreaking material. Found in ERSKINE, R., *What did the Sinkov mission receive from Bletchley Park?*, in: Cryptologia, Vol. 24, 2000, No. 2, pp. 97–98.
74 ERSKINE, What did the Sinkov..., pp. 97–98.
75 DENNISTON, R., Thirty Secret Years..., p. 44, 82.

vide the Americans with all of GC&CS's technical documents.[76] Although several senior figures within GC&CS were initially reluctant to share especially, but not only, GC&CS's Enigma secrets, Denniston's approach prevailed and was effectively implemented through Holden Agreement of October 1942 on naval ciphers and the BURSA Agreement of May 1943 on the army, air force, and the secret service ciphers of Germany, Italy and Japan. From the resulting co-operation, which was later transformed into far-ranging post-war agreements, both the USA and UK benefited significantly.[77]

In conclusion, Alastair Denniston's role within Government Code and Cypher School was very complex and I would argue that it has been in past decades largely misunderstood. AGD was in direct charge of GC&CS from 1919 to 1942. His effort during this period was strongly undermined by the lack of funding, continuous publications of decrypted messages by the British cabinet (particularly in 1920, 1923 and 1927) and by the Treasury's decision to halt all research related to the development of a cypher machine in 1929 and 1930. Despite all these obstacles Denniston managed to eliminate 'official jealousy' as he called it, between the former 40 OB and MI 1B cryptanalysts and recreated the remnants of these institutions into a well-coordinated and effective entity. This was made possible to a large extent due to AGD's ability to foresee which factors would become essential for cryptography and GC&CS as a whole. Denniston had evidently already realized that machines would have a role to play in 1931. He foresaw the importance of mathematicians and, consequently, brought to GC&CS people such as Alan Turing and Gordon Welchman. Additionally, he also realized the importance of US-UK Sigint cooperation and, therefore, supported British trans-Atlantic ties as much as possible. I regard it as unfortunate that AGD has been, for the most part, judged only according to the period of GC&CS's administrative crisis particularly in 1941. This crisis, indeed, stemmed from AGD's inability to adapt both his leadership and organizational structure to the new organizational needs and realties. Perhaps he was becoming "outdated" as Bennett mentioned in his quote, or perhaps he was simply getting old and, therefore, becoming a rigid decision maker after serving in GC&CS for more than two decades. Nevertheless, it should be remembered that it was him who provided GC&CS with a vision and that it was him who eventually prepared GC&CS for its rapid growth and expansion. The fact that most of his achievements and decades of hard work remain unrecognized is a sad reality.

ABSTRACT
THE EVOLUTION OF THE BRITISH SECRET SERVICE AND THE ROLE OF ALASTAIR GUTHRIE DENNISTON

The main aim of this paper is to provide a comprehensive understanding of development of the Great Britain's Government Code and Cypher School (GC&CS) under the sometimes controversial leadership of Alastair Guthrie Denniston from 1919 to 1942. Article underlines that Denniston managed

76 ALVAREZ, D., *Most helpful and Co-operative: GC&CS and the development of American diplomatic cryptanalysis, 1941–2*, in: ERSKINE, R. — SMITH, M. (eds.), Action this day, Chatham 2001, pp. 168–169.

77 HINSLEY, H., Denniston, Alexander...

to turn GC&CS into an effective organization in defiance of the lack of funding, continuous publications of decrypted messages by the British cabinet, and Treasury's decision to halt all research related to the development of a cypher machine. Despite numerous successes has been Denniston's leadership often judged only according to the period of GC&CS's administrative crisis particularly in 1941. Consequently, this paper will conclude by highlighting a complex, yet mostly positive, role that Alastair Guthrie Denniston played in the development of GC&CS.

KEYWORDS
Alastair Guthrie Denniston, GC&CS, British secret service

ABSTRAKT
VÝVOJ BRITSKÉ TAJNÉ SLUŽBY A ROLE ALASTAIRA GUTHRIENA DENNISTONA
Hlavním cílem předložené studie je poskytnout obecný popis vývoje britského Vládního kódovacího a šifrovacího ústavu (Government Code and Cypher School; GC&CS) pod vedením někdy kontroverzního Alastaira Guthirena Denniston v letech 1919–1942. Studie zdůrazňuje zejména Dennistonem řízenou transformaci GC&CS v efektivní organizaci navzdory nedostatku finančních zdrojů, pokračující zveřejňováním dešifrovaných zpráv britskou vládou a rozhodnutí ministerstva financí zastavit veškerý vývoj spojený s šifrovacími stroji. Navzdory nespočtu úspěchů je Dennistonovo vedení často posuzováno pouze podle krize, jíž si GC&CS prošel především v roce 1941. Autor v závěru článku celkově hodnotí (vesměs pozitivně) roli, kterou Alastair Guthrie Denniston hrál ve vývoji GC&CS.

KLÍČOVÁ SLOVA
Alastair Guthrie Denniston; GC&CS; britské tajné služby

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