Anglo - US Co-operation

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The history of co-operation between airmen of the British and American air services in the First World War falls very broadly into three categories: training and combat operations; theory and doctrine; and production. As latecomers both to the War itself, and to the organisation and operation of air forces on a large scale the Americans were anxious to benefit from the hard won lessons and experience of their British and French Allies. On entering the War the US had only 130 officers and some 1,000 enlisted men in its aviation service together with 200 aircraft, not one of which could be deemed suitable for combat.[1] By September of 1917 General Pershing was already planning and air service of 260 frontline squadrons by 30 June 1919.[2]

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If the USA was to build an effective air arm of this size it was obvious to American officers that they should seek to obtain the maximum benefit not only from their Allies' first-hand experience of war, but also from their military organisations themselves. In addition, of course, some spirited Americans had entered the service of the Allies before the US declaration of war in April 1917. The most famous of these served with the Lafayatte *escadrille* of the French Air Service, but others, as we shall see, had made their was across the Canadian border and found their way into the British Royal Flying Corps.

An organisation of the small size of the US aviation section clearly could not expand using its own resources rapidly enough to produce an air arm of sufficient size to meet US wartime requirements without drawing on the already large and well established resources of its Allies. Furthermore, as the Americans had no aircraft suitable for war they were also going to rely on their Allies to a large degree for materiel, and this gave further impetus to the need to train US personnel not only to fly, but also to maintain, foreign equipment. While Americans made strenuous efforts to develop training programmes and facilities in the continental United States, including co-operative efforts with industry, these were never going to be sufficient to support the rapid expansion and were always hampered by lack of equipment and instructors. In the circumstances US officers turned to their Allies for assistance. In Britain's case, this took various forms, but one of the earliest initiatives came from a remarkable British officer, Lieutenant-Colonel [later Brigadier-General] Cuthbert Hoare. Hoare was at the time commander of the Royal Flying Corps in Canada. Remarkably, Hoare, despite the title of his organisation and its location in Canada, reported, not to the Canadian Government, but to the War Office in London. Hoare did not run a *Canadian* Royal Flying Corps but was, in effect, operating an entirely autonomous British military organisation in another nation, and although the Canadian Government gave him its co-operation and support and was in turn kept abreast of his activities, it did not exercise any real control over these activities. With an officer less able or less diplomatic than Hoare, national sensibilities and the sometimes prickly independence, which unthinking British officers could all too readily ignite in Dominion nations, might well have created friction and conflict. Hoare's remit was to establish twenty training units in Canada, with their supporting organisation, in order to provide a steady stream of manpower for the British frontline air service. His organisation was to recruit the personnel and give them initial ground training and basic flying instruction. They would then be sent to Britain to complete their training before moving on to combat units.[3]

As the Canadian Official Historian has commented: "the key to the success or failure of RFC Canada lay in recruiting".[4] Hoare had always sought to recruit Americans into the RFC even before US entry into the War, but US legislation, notably the Foreign Enlistment Act of 1818, prevented recruitment on US soil, and potential recruits had to be enticed across the Canadian border if they were to join up. More remarkable still, however, were his actions after the US declaration of War. On the face of it the

Brigadier - General C G Hoare

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USA's entry into the war threatened to turn off the flow of US recruits for Hoare's scheme, since patriotic Americans might reasonably be expected to enlist in their own nation's air service to fight the war rather than that of an Allied country. Such was not the case, however, and Hoare successfully continued to recruit Americans. The seeds of his success were sown when the US entered the war and the British Ambassador in Washington asked him to meet with US officers and officials to give them the benefit of his experience in military aviation. At this meeting Hoare met Brigadier-General George O Squier, then the Chief Signal Officer of the US Army, but more importantly the man with overall responsibility for the US Army's nascent air service. A number of initiatives flowed from this initial meeting. Subsequently, in May 1917, Squier visited Hoare in Canada and told him that the US Air Board would not object to the British opening a recruiting office in the USA. A British recruiting mission was established in New York, ostensibly to recruit British citizens resident in the US. Hoare went one step further, however, and working with the mission opened an office on Fifth Avenue that actively — if quietly — sought to recruit Americans. Hoare himself was well aware of the tenuous nature of his operation. He told London in September 1917, "The situation is this: the British Recruiting Mission has given a written undertaking not to recruit American subjects; that I can do so is entirely due to personal influence at Washington, and though I think I can carry it through, I cannot possibly give you a definite assurance." Eventually and inevitably his activities drew the attention of others in Washington who were not so well disposed as Squier, and in February 1918 Hoare was forced by the State Department to cease his recruitment activities.[5] The exact number of recruits enlisted via Hoare's unorthodox activities is unknown, but some 300 airmen are believed to have entered the RFC through enlistment via Canada.[6] We might legitimately ask why Squier would apparently so readily agree to suitable candidates for his own air service being 'poached' by the British after the American entry into the War. The answer, in all probability, lies in the fact that Squier knew his own training organisation was inadequate and thought it better to have Americans trained to fight with the British than not to fight at all. He may have calculated that some at least would become available to the American service in due course, and in this he must have been encouraged by the fact that the British agreed to release five experienced US pilots from their own service and transfer them to the US Army where they were promptly appointed as squadron commanders.[7] Furthermore, through one route or another between 900 and 1,100 Americans ultimately flew with the Royal Flying Corps. These men not only provided a very welcome influx of high quality personnel to the British air service, but ultimately proved of even more value to their homeland, since most of the survivors ultimately transferred to the US service bringing with them a priceless inject of frontline experience.[8]

In addition, Squier did not come away from his meetings with Hoare fortified only by promises, far from it. A more obviously mutually beneficial, and thus more sustainable, agreement was also reached between the two men. Hoare had a problem in that the flying programme at many of his RFC Canada schools in Ontario could expect to be badly affected by the severe Canadian winter. In his visit to Hoare in May 1917 Squier had mentioned that the military flying training schools that were scheduled to open in the States were, unsurprisingly, very short of instructors, and asked whether the RFC in Canada might offer any assistance. The imaginative Hoare immediately saw the possibility of an arrangement that would help both parties with their differing training problems. He told the War Office in London of his plan to train one hundred US cadets during the summer of 1917, in exchange for facilities for a Canadian training Wing [later increased to two Wings] at a southern US training base, complete with machines, during the winter months when the Canadian schools would be all but closed by the weather. Hoare's entrepreneurial spirit did not stop there, however, and he was soon scheming with American officers over cocktails at the Raleigh Hotel in Washington before appearing before the US Aircraft Production Board with a proposal for a far more ambitious Reciprocal Training scheme. Under this scheme the RFC agreed to train three hundred pilots, two thousand

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ground crew and twenty equipment officers, all this in addition to the original one hundred pilots from the first agreement. The trained personnel would then be shipped to the United Kingdom where they would be issued with aircraft and equipment before proceeding to France where they would come under the control of the RFC. The original agreement was to lapse in February, but it was extended to April and the total number to be trained was now to be sufficient for 18 squadrons.[9]

Three US squadrons commenced training in Canada, and transferred with the Canadians to three airfields [Benbrook, Hicks, and Everman Fields] at Camp Taliaferro, near Fort Worth, Texas, in the autumn of 1917. The Canadian cadets occupied Benbrook and Everman fields while the US cadets and the Canadian aerial gunnery school went to Hicks.[10] An outbreak of influenza and associated medical quarantine precautions meant that a proportion of the additional eight US squadrons never arrived before the Canadians left in April. Nevertheless there is little doubt that the scheme was of great benefit to both the American and British Commonwealth air forces. As a result of the Hoare/Squire agreements by April 1918 some 4800 personnel were trained for the US air arm. This total included 408 fully trained US pilots along with a further 50 who had been partially trained. Two and a half thousand ground personnel, officers and men, had been fully trained, with a further 1,600 part way through their training.[11] The first American squadron left Texas for England in on 19th December 1917with its full complement of 25 pilots, and three more followed in each of the next three months, thus completing the original agreement to train ten squadrons. The first squadron (17th Aero Squadron) transferred to France in early February 1918, and was attached by Flights to frontline RFC squadrons to gain combat experience.[12] In addition some 1,500 flight cadets had been trained for the British Commonwealth air services. The new Chief of the United States Air Service informed Hoare that these programmes had "conferred great and practical benefit on the United States Air Service".[13] The methods used in the Canadian Gunnery School were subsequently in large part adopted by the US Air Service when it opened its own school at Ellington Field, Texas.[14] Although the original agreement provided for ten fully trained US squadrons to serve with the RFC/RAF in Europe in the event this did not come to pass. Only two US Air Service squadrons, the 17th and 148th Aero Squadrons saw active service with the British, flying with them until November 1918, when they were absorbed in the US Air Service. One other interesting fact is worth noting regarding the Canadian training scheme, and that is that the very first cadets to arrive in Canada for training were from the US Navy and not the Army, and 20 of them completed their entire training in Canada and did not therefore transfer to Fort Worth. Amongst this initial party of US Navy cadets was James Forrestal, later a distinguished Secretary of the Navy and Secretary of Defense.[15]

The Hoare/Squier agreements were not the only mechanisms by which US personnel were trained by the British Commonwealth, with both pilots and ground crew being trained in the United Kingdom. The Bolling Commission led by Major Raynall Bolling, was despatched from the US to Europe in June 1917 to discuss US material and equipment needs, and Bolling discussed the training of American mechanics with the British during his visit.[16] The first contingent of 53 men arrived at Liverpool in early September 1917, and others soon followed including some diverted from France and Italy.[17] The 34th Aero Squadron and detachments of 50 men from an initial seven squadrons, followed soon after by a further five flying squadrons all landed on the shores of the UK. Eventually the demand became so great that a more formalised system was put in place, and in December 1917 the British signed a formal Mechanic Training Agreement which laid down that 15,000 US mechanics would be shipped across the Atlantic for training by 1 March 1918. The expectation was that the Americans would be trained more quickly than could be arranged in the United States, and that they would enable a similar number of British mechanics to be released for service with the Royal Flying Corps in France. Once trained in the UK the American mechanics would be released for service in American Expeditionary Force units in France at the same rate that replacement trainees arrived in the UK from the USA. These expectations were never met, largely because the problem of

shipping 15,000 men safely across the Atlantic was never satisfactorily resolved, and by 1 March only some 4,000 had arrived in the UK. Ultimately, however, the UK-based programme trained 22,059 men, of whom very nearly half were sent on to frontline squadrons in France. In the words of one US historian this programme "made an absolutely vital contribution to the development of Air Service, AEF, capability in France".[18] The programme also proved of great benefit to the British, so much so that when the Americans, faced with a shortage of mechanics in France in May 1918, sought to post personnel from England the British pointed out that under the terms of the agreement this could not be done before replacements had arrived in the pipeline from the USA. An American officer familiar with the workings of the programme wrote:

"I am firmly convinced that if tomorrow the vast majority of American Squadrons were to be removed from England the Royal Air Force [in the UK] would be severely crippled and at certain stations their training would come to a complete standstill."

Eventually the British agreed to the immediate release of 3,500 mechanics who the US would replace as soon as possible with further drafts from the States.[19] The first five squadrons of trained personnel left the UK for France in June 1918, and there seems little doubt that this could not have been achieved through any purely US-based training programme.

If co-operative schemes with the British Commonwealth forces made a major contribution to the practical training of the US Air Service in the course of the war, the former made an equally important contribution to the intellectual development of the infant US air arm. The then Colonel William 'Billy' Mitchell was in the vanguard both in terms of developing US air power thinking and in establishing links with influential practitioners in Europe. Mitchell came to Europe very soon after the US entry into the War, and spent some days with the influential commander of the Royal Flying Corps in France, Sir Hugh Trenchard. When Mitchell sent two papers on air organization back to General Pershing's Headquarters he sent with them a copy of a memorandum by Trenchard of September 1916 on the primacy of the offensive in air warfare. [20] According to Trenchard's biographer, Mitchell met with Trenchard on several occasions during the summer of 1918 and even went so far as to ask the Briton to cast his experienced eye over Mitchell's tactical plan for the St Mihiel offensive. Moreover, Trenchard gladly co-operated more directly in the offensive by acceding to Generalissimo Foch's request (undoubtedly prompted by Mitchell) to support the Americans with the bombers of his Independent Force.[21] The Independent Force was also formally tasked with supporting the Americans in the subsequent Meuse-Argonne offensive. In both instances the main target of the British bombers was the rail networks supporting the German front, particular in the area of Metz-Sablon.[22]

Whilst the links between Mitchell and Trenchard resulted in some very obvious and direct co-operation and influence there were other examples of British influence on US air power thinking which are generally less well-known but in the longer run perhaps equally important. In particular, and in the light of the shared experience, though divergent doctrines, of the USAAF and the RAF in the Combined Bomber Offensive in the Second World War it is of particular interest to note the way in which American doctrine relating to strategic air war against economic targets, so famously expressed in the Air Corps Tactical School's inter-war theorising, had its roots in British thinking from the First World War. In particular the influential 1917 expression of American strategic bombardment doctrine expounded by Major [later Colonel] Edgar Gorrell borrowed directly and extensively, though without acknowledgement, from the writings of Lord Tiverton, at the time an officer in the British Air Ministry. Gorrell was appointed as the Chief of the Technical Section of the Air Service, AEF, in August 1917. Gorrell developed a strong interest in the concept of strategic bombardment and in November 1917 submitted a plan to the new Chief of Air Service, Brigadier General Benjamin Foulois. Foulois approved the plan and made Gorrell head of 'Strategical Aviation, Zone of Advance, AEF'.[23] Gorrell's work relied so heavily on a similar plan written by Tiverton in early September that

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large parts of it were simply lifted verbatim. As US air power historian Tami Biddle has noted in her thoughtful work on American and British strategic air power this was somewhat ironic, since "What came to be known as the 'Gorrell Plan' was later considered paradigmatically American: the 'earliest' and 'clearest' statement of 'the American concept of air power'".[24] Gorrell later wrote a further essay entitled 'The Future Role of American Bombardment Aviation' which drew not only on Tiverton, but also on a paper written by Trenchard in November 1917. In drawing so readily on these British influences "Gorrell infused American air power thought with Tiverton's emphasis on analytical planning and systematic implementation, as well as Trenchard's emphasis on the moral effect of bombing".[25]

In the event, neither Gorrell's plan nor other similar US doctrinal forays into the realm of strategic bombing came to very much during the course of the War. Although this was in part due to the influence of senior Army officers anxious to maintain the focus of the Air Service on tactical support of the Army, it was also in large part due to production difficulties. As we have seen, the US did not enter the war with a single combat-ready aircraft type, and the Americans were perforce compelled to equip their squadrons with proven Allied types. This meant that of 6,364 aircraft delivered to the Air Service in France, 19 were of Italian origin, 258 came from Britain, and 4,874 from France. Only 1,213 were sent from the USA.[26] The attempts to produce Allied designs in the USA were not entirely successful. Hampered in part by the rapid developments in design, such that, for example, the De Havilland DH4 which was ordered in large quantities was already obsolete before entering production, and partly by the difficulty of producing highly complex aircraft designed elsewhere, much treasure, effort and heartache were expended for surprisingly little tangible result. The most interesting of these attempts from the perspective of Anglo-American co-operation was the Handley-Page twin-engine long-range night bomber, which went into UK production in July 1917. Although the Italian Caproni heavy bomber appeared to possess better performance, there appeared to be technical and bureaucratic obstacles to its rapid production in the USA. Thus the War Department plumped for the Handley-Page design powered by American Liberty engines. Aware that no aircraft at that time was capable of flying the Atlantic, the plan was for US companies to build prefabricated parts sufficient to build aircraft to equip 30 bomber squadrons. The prefabricated materials would then be transhipped to the UK, where they would be sent to assembly facilities in disused Lancashire cotton factories. An agreement to this effect was signed in January 1918.[27] In fact the British had sent a complete set of drawings for the Handley-Page to the USA as early as August 1917. However, subsequent design changes meant that two further sets of drawings had to be sent, necessitating in some cases the scrapping or re-working of existing parts. As the Handley-Page aircraft had more than 100,000 individual parts this was a major undertaking, and the US sub-contracting companies quickly fell behind schedule.[28] Although the assembly facilities and five training airfields in the UK were to be prepared by a small army of labourers sent from the USA, only about 60 per cent of the additional manpower arrived before the Armistice. In addition poor weather, and labour conflicts with the British trade unions, which led to frequent strikes, further delayed the project. By the end of the war only fifty engines and 95 per cent of the parts to complete one hundred aircraft were available in the UK.[29] And thus, although the US Army had two squadrons of Handley-Page night- bombers in training in the UK on 11 November 1918: "Not a single night-bomber manufactured in the United States during World War I reached the front."[30] Unfortunately, the one part of the programme that worked smoothly was the transfer of the several thousand men who were intended to maintain the aircraft. These unfortunates waited in vain in the UK for their charges to arrive. The then Colonel Henry 'Hap' Arnold was moved to comment that: "the only result was that the American air outfits in France were deprived of their needed services".[31]

It would nevertheless be wrong to end this very brief and far from comprehensive survey on

a downbeat note. The assistance given by the Royal Air Force and its predecessors in helping to establish American air power on a firm footing were more than re-paid both by the exploits of American airmen flying with the British Commonwealth forces and by the assistance given to the Canadian training programmes. The links that were established during the First World War, though they lay dormant for two decades, were very quickly re-established during the second great conflict a generation later. Large numbers of UK airmen were again trained in Canada, and once again as soon as American entered the War, training facilities were made available in Texas and other Southern States. And yet again free-spirited Americans, convinced that the cause was a just one, sought to join the Royal Air Force and Commonwealth air forces even before the United States entered the Second World War. Thus at least twelve US citizens flew with the RAF during the Battle of Britain, more than a year before Pearl Harbor, and by early 1941 the RAF was able to establish three fighter squadrons whose pilots were almost exclusively American. As with an earlier generation most of these men subsequently transferred to the USAAF, where they were once more able to provide a leavening of experience which was of incalculable benefit to a force going into combat for the first time. These strong links have endured over subsequent generations and conflicts, but their foundations lie in the bonds established in the World's first truly global war of 1914-1918.

Notes

1 Tami Davis Biddle, Rhetoric and Reality in Air Warfare, (Princeton University Press, Princeton, 2002) p 50.
2 Rebecca Hancock Cameron, Training to Fly – Military Flight Training, 1907-1945 (Air Force History Program, 1999), p 143.
3 On Hoare and the establishment of The Royal Flying Corps in Canada see S F Wise, Canadian Airmen in the First World War — The Official History of the Royal Canadian Air Force, Volume 1 (Toronto University Press, Toronto, 1980) pp 76-82.
4 Wise, p 83.
5 Wise, pp 89-91.
6 Roger G Miller, "The Tail to Tooth Ratio — Royal Flying Corps and Air Service Co-operation in Maintenance Training During WW1", in Journal of the Royal Air Force Historical Society, No 32, p 11.
7 Wise, p 94 fn.
8 Miller, p 11.
9 Wise, pp 91-97.
10 Wise, p 94
11 Cameron, pp 108-110.
12 H A Jones, The War In the Air, (6 Volumes, Oxford, Clarendon Press, 1935), Volume V, p 466.
13 Wise, p 95.
14 Cameron, p 130.
15 Wise, p 93.
16 Miller, p 17.
17 Cameron, p 158.
18 Miller, pp 18-20.
19 Miller, p 19.
20 Mitchell's papers are re-produced in Maurer Maurer, The US Air Service in World War I, Volume II, Early Concepts of Military Aviation (USGPO, Washington DC, 1978) pp 108-111. For a flavour of Trenchard's Memorandum see, Andrew Boyle, Trenchard, (Collins, London, 1962) pp 186-188.
21 Boyle, p 300, and Jones, Vol VI, pp 148-149. The Independent Force was a force of British bomber squadrons established under separate command arrangements from the rest of the British air forces in France and intended to undertake independent strategic operations against Germany. Trenchard was placed in command of the force and reported back to the Air Ministry in London, rather than the British High Command in France. In fact Trenchard allocated far more of his effort to bombing French railways and German aerodromes than he did to attacking targets in Germany — For more on the Independent Force see Biddle, pp 40-48.
22 Jones, p 149, and Maurer, Vol III, pp 5-59.
23 Maurer, Vol II, p 141. The plan is reproduced in this Volume pp 141-157.
24 Biddle, p 54.
25 Biddle, p 55.
26 Miller, p 23.
27 Miller, p 20
28 Miller, p 20 and I B Holley, Ideas and Weapons (Yale, Yale University Press, 1953) pp 144-145.
29 Miller, p 21.
30 Holley, p 145.
31 Miller, p 21.