Article

The Man and the Myth – Robert Smith-Barry as 'The Man Who Taught the World to Fly'

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Biography: After twenty-five years in senior roles in industry and commerce, David gained a Master's degree with Distinction in *Britain and the First World War* in 2020. His MA thesis focussed on the development of the Royal Flying Corps (RFC) in 1914 and 1915. He continued his research into the RFC and was awarded a PhD for his thesis on the recruitment and training of the Corps this year. Both his MA and PhD research have been awarded academic prizes by the RAF Museum.

Abstract: Today, the Smith-Barry Academy is a training facility within the Central Flying School of the Royal Air Force (RAF). Based in the Trenchard Building at RAF Cranwell, the academy is responsible for researching new training methodologies. That Marshal of the RAF Sir Hugh Trenchard (later Lord Trenchard) and Robert Smith-Barry's names are enshrined together within the same institution today has a certain irony. Though both men are intrinsic to the history of pilot training, their relationship, as will be shown, eventually reaches a breaking point. This article will investigate how Smith-Barry's reputation in the RAF was created, examine his First World War experience and opine on the extent to which his prestige is deserved.

Introduction

In 2014, a blue plaque was unveiled at Gosport, celebrating the contribution of Robert Smith-Barry to flying training development. The British Broadcasting Corporation's (BBC) account of the event included several assertions that chime in today's historiography of the Royal Flying Corps (RFC) during the First World War. Amongst them was the claim that more than half of pilots died in training until Smith-Barry created a system that 'increased the chances of survival'.[1] Smith-Barry 'invented the Gosport Tube'. He 'revolutionised the system and wrote the first flying training manual', and finally, 'He was described by Lord Trenchard as the 'man who taught the air forces of the world to fly''. My new research proves these assertions to be false. This article will focus on how Smith-Barry gained his reputation, and by exploring his service during both world wars, place his contribution in context and opine on whether his reputation is justified.

The Creation of a Reputation

Smith-Barry's moniker as 'the man who taught the world to fly' has become generally accepted by aviation historiography. As the BBC suggested, purportedly, it was Sir Hugh Trenchard himself who gave Smith-Barry this title. However, this research has been able to find no direct evidence that this was the case, and believes it more likely that the comment was attributed to Trenchard by C.G. Grey, the influential but controversial editor of *Aeroplane Magazine*.[2] Grey made similar assertions on many occasions, such as at a 1938 Gosport Reunion Dinner when he also claimed 'the fact that the Gosport System was worldwide was the greatest monument to Smith-Barry'.[3] Grey remained a staunch advocate and would later claim in his magazine after the Second World War that Smith-Barry 'landed a Blenheim on an impossible field when his engine quit on him.'[4] This interesting interpretation of Smith-Barry's accident will be investigated later.

The first use of the 'man who taught the world to fly' description appeared in the press in May 1940. On the 1st and 2nd of that month, a few newspapers ran a piece entitled, 'Father of Flying Training.'[5] In it, Smith-Barry was described as 'genial, bearded, powerfully built […] and now 54 years old.'[6] The timing of this article was no coincidence. Smith-Barry was at this stage determined to be involved in training during the Second World War, and the timing of the article coincides with the height of his efforts. Aside from this, other references are hard to come by. When Trenchard wrote a foreword about training in a 40th Anniversary celebratory book for the Central Flying School (CFS) in 1952, he did not mention Smith-Barry at all in his introductory words.[7] Even amongst family members, there was some confusion about where the term emanated. In 1950, for example, Smith-Barry's cousin claimed, 'Sir John Salmond told me recently he 'did more than anyone else to teach the world how to fly''.[8] In the Press, the only other significant mention of Smith-Barry before his death in 1949 was concerning his tax affairs, disputes over which landed him in the High Court.

Former pilots also make little or no mention of him. Gwilym Lewis, in his diary, detailed significant improvements that were made in ground-based and in-flight training but did

not mention Smith-Barry.[9] Sholto Douglas, who is passionate and articulate regarding his view of training, is the same. Ditto Cecil Lewis and countless others. An interesting illustration that Smith-Barry was not widely renowned can be found in the two autobiographies of Norman Macmillan. Macmillan attended the Gosport school as a pupil, so one would imagine he was well-placed to comment on Smith-Barry. However, it is notable that he does not seem to have known for sure who was responsible for the school. In his 1929 memoir, he wrote that 'I flew to Gosport to the Special School of Flying, commanded, and I believe originated, by Lieutenant Colonel (Lt Col) Smith-Barry.'[10] Macmillan reissued his memoir forty years later, a very different acerbic version to fit in with the style of First World War memoirs at this time. In this 1969 re-write, any doubts about Smith-Barry's contribution had gone. Macmillan now declared, 'The man who created this – Lt Col Smith-Barry was a genius. He believed in short hours and concentrated work.'[11] There is a good reason why Macmillan's memory had improved by 1969. By then, efforts had been underway for as many as a dozen years by Smith-Barry supporters to create a new version of his achievements. Macmillan himself had been approached as a potential author. The seeds for this work, first planted in 1957, would eventually blossom into Frank Tredrey's book, *Pioneer Pilot: The Great Smith Barry who Taught the World How to Fly*, nearly twenty years later. This book has become the source of information on flying training and is widely quoted by historians - good and bad - today.

Smith-Barry may have fallen from the limelight after the Second World War, but his reputation was partially cemented not long after the Great War ended in 1918. The official history of the war in the air spawned six volumes between 1928 and 1937, and sections on training commend Smith-Barry's methods and achievements. This research has traced the source of these sections predominantly to a 1919 memorandum from Ewan Gilchrist entitled, '*Report by Captain Gilchrist on the Special School of Flying, Gosport*'.[12] Cape Town-born Gilchrist was not an impartial observer. He had served under Smith-Barry in No.60 Squadron between July and December 1916 before being seriously injured in a crash that left him unable to fly until August of the following year. During this period, Smith-Barry stayed in regular contact and promised Gilchrist a role as an instructor at the newly formed School of Special Flying, a promise he duly delivered on. The two later became close friends. Gilchrist wrote of Smith-Barry: 'Perhaps the feature that was the most striking about Gosport - very carefully fostered by Smith-Barry, who was in this respect a great leader - was the high flying 'moral' that formed the atmosphere of all the school's activities. We not only were charmed by Smith-Barry's very strong personality; we admired his audacity in the air, and I think I should be upheld unanimously in my statement by all the instructors - and quite unquestionably by the first half dozen to be appointed when I say that the driving force of our efforts - was the desire to please Smith-Barry.'[13] Other Gilchrist comments were not included in the history, such as: 'For the rest, one's memory consists of living in great luxury at a private house we took about 3 miles from the aerodrome and of quite furious and infinitely dangerous 'stink-bike' races down to the aerodrome or back that we used to have every day.'[14]

The affection and loyalty to Smith-Barry, whilst genuine, are essential in understanding the creation of his legacy. His unorthodox methods drew men in. Smith-Barry had an aura of a maverick that some subordinates found attractive. It is important to note that some senior figures close to training also give Smith-Barry credit. Guy Livingston, Sir John Salmond's Chief of Staff, for example, stated in his memoir that Smith-Barry: 'Evolved a system of training so superior to that which existed before that the standard of pilots of the RFC was so immeasurably superior to that produced under the old system that the RFC rapidly regained its superiority over the Germans.' Sir William Sefton Brancker,[15] Deputy Director-General of Military Aeronautics, writing before he died in 1930, recalled: 'I do remember the extraordinary work done by Major Smith-Barry at Gosport […]. We established a school for the training of instructors under Smith-Barry […], from which was evolved the famous Gosport system of training; it completely revolutionised our old hide-bound and slow methods; it made training far safer and more thorough.'[16]

Even Andrew Boyle, Trenchard's biographer, writing six years after his subject's death, described 'the great Smith-Barry, who contributed more to the art of airmanship as a result than any other pilot on earth.' That said, perhaps Boyle's description of Smith-Barry as an 'opinionated individualist' is equally deserved, as will be shown.[17]

The Writing of Frank Tredrey's Book

Smith-Barry's current reputation is built not on the comments of those above, but rather on the work of former RAF Group Captain Frank Tredrey. It is his book, after all, that contains the famous quote attributed to Trenchard on the title page. It is an important work because it has become the de facto story of Smith-Barry's career and used by just about every air historian since.[18] Tredrey claimed that he leaned heavily on a short memoir by Sidney Parker. Parker, a former No.60 Squadron pilot and friend of Smith-Barry, later succeeded him at the School of Special Flying. Writing in 1964, he stated: 'There has been a lot of nonsense written about Smith-Barry and a lot of sense that has not been written […], and it is with the object of doing some small measure of justice to this great man that this screed is being written.'[19]

The construction of Tredrey's book is, however, more interesting than this. Tredrey's work can be reconstructed from private letters, which to his credit, he left with the RAF Museum. The book was built by a small group of Smith-Barry's friends and fellow No.60 Squadron officers, led by Canadian Duncan Bell-Irving. Bell-Irving's support for a project is demonstrated by a presentation he made to the Royal Canadian Air Club Association in the 1950s, during which he said that Smith-Barry: 'Produced practically all the great pilots in the last years of the war [and] if it had not been for him, the Allies would have very probably been beaten in the air, which would have meant losing command of communications, and eventually the war.'[20] This hyperbole is rendered even more astonishing when Smith-Barry's surprisingly short tenure is considered, as we shall see.

Work for a potential book began in May 1958, nine years after Smith-Barry's death, when Bell-Irving reached out to his widow Anne. Bell-Irving had been a pilot in No.60 Squadron in 1916

and was brought to Gosport as a Flight Commander when Smith-Barry took over No.1 Reserve Squadron in 1917. In a letter to Anne, Bell-Irving articulates the idea of a book for the first time: 'At this late date, some of 'Smith-B's' old friends have come around to the idea that something should be done to recall to posterity the very great contribution to aviation and to the first war victory of the Allies made by Bob Smith-Barry.'[21]

Bell-Irving continued why he believed the project was necessary in what became the essential raison d'être for Tredrey's later book. It is worth quoting in full: 'The broad basis of our thinking is that Bob was purposely and designedly side-tracked and submerged by various of his Service seniors by reason of his personal brilliance: that in comparison with sundry regular officers whom we have been invited to recognise as Air Force pioneers and also many 'star-turn' air heroes, the great name of Smith Barry is in grave danger of being forgotten'. . . 'We think of him as the man who revolutionised flying training and flying technique, and in doing so, in the face of the strongest opposition of many lesser men, made the difference which enabled us to win the war: possibly both wars'...'We think, too, of how near Smith-B came to the top-most Air Force command and of the machinations which lost him the appointment.'[22]

Smith-Barry's story then, according to Bell-Irving, was not simply a tale of improving flying technique but a rather more intriguing one of a man against the system. Soon after his contact with Anne Smith-Barry, in June 1958, Bell-Irving approached author Quentin Russell about writing the book for them. In colourful language, Bell-Irving suggested: 'The man who won the first war in the air, and had a remarkable influence on winning it in the second, was the Irish nonconformist R.R. 'Bob' Smith-Barry. He was [. . .]designedly 'shot down' and pushed into Air Force oblivion by lesser men of the Regular Soldier variety. Even Boom Trenchard did less for the RAF than Smith-Barry: yet who hears of Smith-Barry now?'[23]

Anne had been consulted on the choice of author and opined that: 'I feel it should be somebody with discretion as to the use of the papers. They may be libellous, particularly Bob's paraphrase - not sent - answer to Portal.'[24]

The letter that Smith-Barry wrote but never sent occurred after Sir Charles 'Peter' Portal rejected his training proposal in 1939 – a rejection that will be discussed later. Portal was one of those approached by Parker and Bell-Irving to take part in their Smith-Barry venture but replied on 23 July 1958 that: 'I am sorry to have to tell you, however, that I don't think I ever wrote to him or had a letter from him in my life: my time in (No.) 60 Squadron was very short, and I left Gosport with the Squadron in early May'16 and never returned there.'[25]

This is demonstrably untrue, and perhaps due to discretion or disdain, Portal wanted no part in the work. When informed of Portal's comments, Anne Smith-Barry told Bell-Irving: 'Lord Portal certainly did write to Bob as he showed me his letters at the beginning of the war - they were always most tactful and conciliatory but **not** helpful. Presently you will see a copy of what Bob

wrote to him, also what he would like to have written but didn't send.'[26] Whatever Smith-Barry would have liked to say remains hidden. Anne must have thought twice about sending it, as it is not in Bell-Irving or Tredrey's file.

Other No.60 Squadron men were approached, as well as selected others whom Bell-Irving hoped would be sympathetic to the story. Parker, Bell-Irving and a third former No.60 Squadron pilot, Stanley Vincent, were careful in selecting whom they approached, choosing not to make contact if they perceived forthcoming comments might be negative. Vincent committed to contacting Sir John Salmond, who, as head of the Training Division, one would have thought would have been an essential witness. However, there is no record of him doing so, and nothing from Salmond ever made its way to Tredrey. This approach led to a narrow, one-sided tale of Smith-Barry's role.

By 1959, Bell-Irving had received several rejections from authors, including Russell and MacMillan as well as another former RFC man turned author Arch Whitehouse. Vincent also approached John Taylor, who had just released his book, *C.F.S. Birthplace of Air Power*. Vincent had provided material for Taylor and told Bell-Irving that Taylor's work 'does, in fact, give considerable credit to Smith B (a good deal of it owing to me!)'[27] At this stage, having tried and failed to find an author, Bell-Irving was forced to conclude that his project was dead. That was until Air Chief Marshal Sir James Robb saw an advertisement in *Aeroplane Magazine* in 1961. Robb had dealt with Smith-Barry in the Second World War.

The advertisement placed by Frank Tredrey was seeking information on the career of Smith-Barry. It would take Tredrey until the summer of 1962 to discover, having also contacted Anne Smith-Barry, that Bell-Irving had made initial approaches. Before handing over his material, Bell-Irving sought assurances from Tredrey that the materials would be used 'responsibly.' In discussing his progress, Bell-Irving told Tredrey: 'Some were quite interested […] Some are disinterested: the late 'Boom' Trenchard and Smith-Barry did not see eye to eye, and Lord Rothermere resigned rather than take sides with Smith-Barry against Trenchard and the established scheme of things.'[28]

Tredrey continued his research but found fewer records than he would have liked or expected. Firstly, he found that nothing remained from Smith-Barry's tenure at the School of Special Flying. In February 1965, a frustrated Tredrey wrote to Bell-Irving: 'Part of my struggle in collecting material about him has been because he seemed to burn everything, lose it or otherwise dispose of it whenever he left a station. The vital records of Gosport, HQ Training Brigade York, No.60 Squadron in 1916 - all are missing from the official archives. And finally, his private papers were 'lost in a flood' at Durban.'[29]

In the meantime, Robb provided Tredrey with a copy of Scott's No. 60 Squadron history and some of his personal correspondence.[30] Tredrey notes the conflicting nature of accounts. Was he a good pilot or a poor one? Hands-on or absent? Misunderstood or a schemer?

These contradictions, plus a dearth of official material, led to Tredrey writing to Robb in November 1962 to say that he was to make another effort to find the truth in the archives before starting work on the book in 1963. In the event, Duncan Bell-Irving would die in 1965, James Robb in 1968 and Anne Smith-Barry in 1969. None would see Tredrey's book, which would not be released until 1976.

Robert Smith-Barry's First World War

Robert Raymond Smith-Barry was born in London on 4 April 1886. He was the only child of James Hugh Smith-Barry and Lady Charlotte Cole, the daughter of the Earl of Enniskillen, with both families descended from the Irish gentry. The young Robert had all the opportunities his class brought him but he failed to seize them fully. As with many other early officers of the RFC, family connections allowed an easy passage for him into Eton. Showing problems with authority that would dog his career, he was expelled, 'your son we can do nothing for, he is idle and appears to take no interest in the subjects before him', his tutor allegedly told his father.[31]

James Smith-Barry hired a private tutor for his son and sought a place for him at Cambridge University. Some historians claim that Smith-Barry attended but failed to complete his degree, while others state he failed his entrance exams.[32] Either way, Smith-Barry had failed to show sufficient prowess to complete his studies. He returned to his family home in London and was allowed to pursue a passion for the piano, which he was said to have mastered. His father found him a position in the diplomatic service in Istanbul, but again his son showed no gumption and soon returned home. It was then that his parents paid for him to take flying lessons. Finally, Smith-Barry had found his vocation, securing Royal Aero Club certificate number 161 on 28 November 1911 at the Bristol Flying School. Pre-war Smith-Barry spent some time as a civilian instructor before joining the new Royal Flying Corps as a Second Lieutenant (2/Lt) in the Special Reserve in October 1912. A week later he started the first RFC course at the new Central Flying School.

It is intriguing to wonder whether the conflicts that Smith-Barry would create later in his career originated in this early period. He came from a wealthy family but had squandered many of the advantages his class had given him. Now he found himself in the RFC, very much a minority. He was good enough to be selected among the first 101 officers sent to France in August 1914, but he was one of just ten from the Special Reserve, that is recruited from a civilian background. The other men were all former army officers and lacking a military background, the transition to army life, albeit in a new and in many ways different service like the RFC, must have been challenging for Smith-Barry.[33]

Smith-Barry's initial war in France lasted just a few days. On 18 August, near Peronne in the Somme region of France, Smith-Barry's BE8 was wrecked in an accident which killed his observer Corporal Fred Geard.[34] The crash resulted in a lengthy hospital stay for Smith-Barry, and it was March 1915 before he could fly again at Brooklands. He then spent over a year in

various training squadrons, eventually being promoted to Flight Commander. It was not until 10 May 1916 that Smith-Barry joined No.60 Squadron as one of three flight commanders under Major 'Ferdie' Waldon. The Squadron left for France on 25 May 1916, and following the death of Waldon in early July, Smith-Barry was promoted to command the squadron. After 192 days in France with No.60 Squadron, he returned to England to head No.1 Reserve Squadron on 29 December 1916.[35] By comparison, having spent 460 days in training positions, it is perhaps strange that he later declared training was 'left to those who were resting, those who were preparing to go overseas, and those who had shown themselves useless for anything else'.[36]

We know from Smith-Barry's service record that he became commander of the new School of Special Flying for instructors at the beginning of August 1917, by which time he had experimented with his methods on only approximately sixty students. Tredrey claims that on the first course at the new school, only two of the men 'had flown as observers.' The rest, he said, were regimental officers from the School of Aeronautics at Reading and had not yet been in the air.'[37] Tredrey may have been spun a yarn by Smith-Barry's acolytes, as from archival files, in Smith-Barry's own words, 'twelve of the thirteen are Observers so that there was somewhat better material to work with than the average.'[38] Divisional Command asked for details of the outcome of this course and thus, the men whose training hours and progress were sent were the pick of trainees, quite unlike the men Tredrey mentions in his book.

In his reminiscences of his experiences at the school, Gilchrist claimed: 'One of the ways in which we used to flatter ourselves was by training pilots who had been turned down as useless and incapable of flying from the training schools, and with these, we had few failures.'[39] The assertion that poor flyers were sent to the school runs contrary to all other evidence. Throughout the war and at all stages of flying training, instructors were encouraged to weed out those incapable – there were few second chances. In planning, the RFC and RAF both assumed 25 to 30 percent attrition. In fact, Smith-Barry himself wrote of his course, 'In 16 weeks work it has been found necessary to remove 45 per cent of the pupils from Maurice Farman Squadrons, and 5 per cent of those from Higher Training Squadrons. This has not been enough. I should certainly have got rid of more, i.e. have set a better standard.'[40] Finally, Gilchrist's claim that the cream of the flying training schools would take in 'useless and incapable' flyers is simply unimaginable.[41]

In May 1917, Smith-Barry articulated his early thoughts based on his experience at No.1 Reserve Squadron.[42] He acknowledged that 'some may think them heterodox, but most, it is thought, will consider them quite normal, and indeed rather old fashioned.'[43] In the document, Smith-Barry stressed the importance of dual control and an important change to current practice: at least half of the dual control instruction should occur after 'the pupil has gone off alone.' In other words, this was the sensible recognition that a pupil should return to his instructor after attempting manoeuvres himself to remove any bad habits that might have been picked up in practice. While Smith-Barry believed his school would train men to fly, it was only a month after the school's approval that Brigadier General Charlton, the Director

of Air Organisation, announced a new purpose for the school. In what Charlton called 'super training', the School would now focus solely on a new important activity, the instruction of instructors.[44]

Interestingly if, as Tredrey claims, Smith-Barry's methods were 'immediately accepted' as the new basis for teaching, it was not until October 1917 that some five hundred copies of his notes were distributed to other training squadrons.[45] As well as ordering this distribution of the Gosport methods, Salmond also ordered that all new instructors should be trained in them going forward. Additionally, existing instructors would be required to do refresher courses at Gosport, and veteran Gosport instructors should visit other pilot-training units to check on methods and standards.[46] Instructors were told to let advanced pupils: 'fly exactly as they chose, their experiments being limited only by the state of their own nerve.' Instruction entailed teaching: 'Pupils by means of dual control how to get out of all the various difficulties which one may get into in flying. The object has not been to prevent flyers from getting into difficulties or dangers but to show them how to get out of them satisfactorily and, having done so, to make them go and repeat the process alone.'[47] In his distinctive style, Smith-Barry noted, 'If the pupil considers this dangerous let him find some alternative employment, as whatever risks he has been asked to run here, he will have to run 100 times as many when he gets to France.'[48]

Thus, some of Smith-Barry's ideas had had an impact.[49] At this stage, Smith-Barry's star seemed to be in the ascendant. His methods were accepted for instructors, and plans were afoot to make the school a specialist instructor's academy. However, this was not to Smith-Barry's liking, and within just a few short months, he had been marginalised. The bald facts from his service record are that on 23 January 1918, he was promoted to head the Northern Training Brigade. At some point, he returned to Gosport and from there, on 21 May 1918, he was sent to America.[50] At face value, this seems like a reasonable progression and certain No.60 Squadron acolytes of Smith-Barry claim that he was indeed promoted. Parker states, 'Changes were now taking place in Smith-Barry's career, and he was shortly afterwards promoted to Brigadier General and moved to NE Group'.[51] Given this, why would historian Dennis Winter claim in *First of the Few* that 'the RAF [sought] to get rid of him and ignore his achievements as soon as it decently could'?[52]

The truth can be pieced together from several different sources and is quite different to both Parker's and Winter's versions. Things started to turn for Smith-Barry in October 1917 when his commanding officer Salmond moved from the Training Division to London to become Director General of Air Organisation.[53] While there is no evidence of a close relationship between Smith-Barry and Salmond, Salmond had trusted the maverick in Smith-Barry to put his ideas into practice. Salmond was to be joined in London by Livingston, and their successors in the Training Division were Edgar Ludlow-Hewitt and Charles Longcroft. Smith-Barry likely saw Ludlow-Hewitt as a peer rather than a commanding officer. Both had been pilots in the fledgling RFC when it was sent to France in August 1914. Longcroft too, was not someone with

whom Smith-Barry would have a natural affinity. Sandhurst graduated and an Army officer since 1903, he had joined the Air Battalion at the first opportunity in 1911 before moving to the RFC when it formed. He had risen through the ranks commanding squadrons, wings and then brigades. He, therefore, had significant experience in managing large organisations and was well suited to head the training organisation.

On 9 November 1917, Smith-Barry issued a report on French flying schools and potential personnel savings that could be affected.[54] Why he was instructed to head to France is not definitively known, but given Salmond's desire to drive efficiencies in the organisation, this was likely a fact-finding mission to aid comparisons. On his return, Smith-Barry submitted a lengthy but rather confused document. Initially, he extolled the virtues of the larger French schools. 'At Pau', he said, 'no new machines are received and […]none are struck off charge however badly they may be damaged'. All machines, he claimed, were repaired by mechanics on-site.[55] However, then he turned to French techniques. 'The flying', he said, 'is of a very second-rate character, and the moral of both instructors and pupils could not possibly be worse. Pupils are on this account, reluctant to go there.' Having also ridiculed French efforts at aerobatics, he stated that 'the aeroplanes appeared to be being smashed at an astounding rate. Every landing was a matter of the gravest anxiety.' With no underlying data, he then claimed that the French suffered 12.5 per cent of their machines smashed per diem, the Training Brigade in Britain almost 10 per cent, and his Gosport school just 3 per cent. Thus he said, 'the French at Pau have to cope with four times as many smashes per machine as I do here, despite the risky experiments that are being made.'[56] Smith-Barry neglected to mention that his French and British statistics, even if true, would have been based on 1,000s of machines, his Gosport comparable was based on just twelve.

Even though Smith-Barry was presumably also to investigate French teaching methods, he saw no need. He arrogantly proclaimed, 'Owing to this marked inferiority in the French flying, I did not enquire too closely into the methods of teaching or the output of pilots.' Smith-Barry then made a rather large leap to his conclusion. 'Therefore, if we could abolish wings and squadrons and create large schools by uniting several aerodromes under one head and running them as one unit with a single main workshop', significant efficiencies in manpower and machines could be achieved. His calculations of a possible 50 per cent saving were based more on creative mathematics than any weight of evidence.[57]

Smith-Barry did not wait for a reply and, on 14 December 1917, issued a second paper, this time nakedly entitled *Report on Proposed Large Flying Schools from Gosport*. Now, he set his sights on commanding the larger flying school and taking over all ground instruction from the long-established Schools of Military Aeronautics, which would be abolished. He claimed that despite his instructors working no more than a maximum of one and a half hours per day, his pilots could be ready for France in half the time of other training establishments. Based on only three months of data and having taken in the ablest recruits, such claims were contentious, to say the least.

In remarks unlikely to endear him to fellow members of the Training Division or its Commanders, he stated: 'The present arrangements [in Britain] are so chaotic, even if I were to enter upon a long description of them, it would be very difficult to say precisely what the proposed scheme or any other partial scheme would replace. […] It would need too much space to criticise [the Training Divisions' aircraft requirements and length of training courses]. I leave it, therefore, to be its own criticism.'[58]

No official response to Smith-Barry's proposals can be found in archival files. Wiser, more experienced training figures were likely unmoved by his proposal. Indeed, Brigadier General Ludlow-Hewitt chaired a second conference of 'Officers Concerned with the Training of Pilots in the RFC' at the Air Board Office of the Ministry not long after Smith-Barry's proposal. It is telling that Smith-Barry was not invited to the sessions during which his proposals were not discussed.[59]

The report ignored, Smith-Barry's indignation would have been amplified on 6 January 1918, when his school was 'demoted' back into the Training Organisation alongside other schools. Henceforth it would be administered by the Southern Training Brigade and not by the Training Brigade HQ directly.[60] On 27 January, Smith-Barry was told he would leave Gosport to take command of the Northern Training Brigade at York. Soon afterwards, in early February, George Philippi, one of Smith-Barry's closest friends and another No.60 Squadron pilot, moved to the Air Ministry. Philippi had spent much of 1917 unfit for flying, having been wounded and was now made the Personal Secretary to the first Air Minister, Lord Rothermere.[61]

Smith-Barry used his time in York not to take forward Northern Training Brigade but to scheme for a more prominent role for himself in London. What is clear from archival files and many other accounts is that Smith-Barry reached out directly to Rothermere at the Ministry. The communication was uncovered, and on 6 February, Smith-Barry was formally reprimanded. Tredrey quotes Longcroft's letter stating: 'It is noticed that you are in the habit of communicating directly with the Air Ministry. Your attention is directed to the King's Regulations, para. 445, which clearly lays down that this procedure is illegal. Under no circumstances, therefore, will you communicate directly with the Air Board either by letter or by telephone, nor will you visit the Air Board without first obtaining permission from this Headquarters.'[62]

Parker claims that Smith-Barry had gone beyond writing letters and had visited Rothermere and, rather less convincingly, Prime Minister Lloyd George.[63] While the latter visit is almost certainly Smith-Barry bravado, Boyle writes that 'Longcroft began to receive a "daily barrage of petulant minutes' from no less a person than Rothermere.'[64] Longcroft confronted the minister to find him astonishingly well briefed on training losses at Gosport. Further, Rothermere made insinuations that Longcroft was not rolling out Gosport methods quickly enough. On learning what had happened, Longcroft was furious at being undermined in this manner and requested

a return to France. It would appear that at this point, Smith-Barry had convinced Rothermere that he should take over RFC training.

From his inside position at the Air Ministry, Philippi wrote on 8 March to Smith-Barry, 'I think we've got 'em by the short hairs at last. Don't make any moves at all until you see me again'.[65] Parker claims that Smith-Barry was recalled to London by Rothermere and that the two of them began planning a training overhaul. Lacking any self-awareness whatsoever, Parker wrote that Smith-Barry had decided: 'Trenchard was to go […] Removing Trenchard from his command was the most difficult task SB had to cope with.'[66] While, with the benefit of hindsight, such a scheme sounds crazy, it is apparent that Smith-Barry genuinely believed it was happening.

At this stage, Ludlow-Hewitt discovered Smith-Barry back in London, apparently installed as Longcroft's replacement. Trenchard simultaneously heard from both Ludlow-Hewitt and Longcroft about what boiled down to a coup. While Trenchard could not appease Longcroft sufficiently for the latter to stay, he ordered Smith-Barry back to Gosport and confronted Rothermere. The Minister admitted that 'Smith-Barry had proposed several radical suggestions for the reorganisation of the Training Division in a series of private letters.'[67] Smith-Barry's temerity 'staggered Trenchard less than Rothermere's bland acknowledgement that he had encouraged the correspondence.'[68] As Parker put it naively: 'In establishing Gosport, it was necessary to win over the heads of the Flying Corps but to establish a fighting force, it was necessary to go much further, right over the heads of the Air Force Command to the Government itself.'[69]

Clearly, these events soured the relationship between Trenchard and Rothermere, although, in truth, their relationship had already been seriously damaged due to differing opinions regarding the creation of an independent RAF. Trenchard used this issue as the proverbial straw that broke the camel's back and resigned, causing a military and political stir. When the dust settled, Trenchard would return to head the new Independent Force, a strategic bombing function, but the uproar cost Rothermere his job. With his political sponsor gone and trust amongst senior officers no doubt devastated, Smith-Barry was finished as a force in the new RAF.

While Smith-Barry's subsequent move to America was portrayed sympathetically as an opportunity for him to extol Gosport's methods there, even Parker referred to the move as 'Smith-Barry's exile to the USA.'[70] He recalled that 'Smith-Barry had to be removed. First, it was suggested that he be posted to far away Egypt, but then as America was showing great interest in the Gosport system, it was decided to 'exile' Smith-Barry and a small staff (including Philippi) to the USA and let them expound his theories to the Red Indians.'[71] He was officially told of his move on 29 May 1918.[72] There he would report to Brigadier General Charles Lee at the British Aviation Mission in Washington. Lee was a former Lt Col in the West Somerset Yeomanry but had been attached to the RFC since November 1914 and worked his way up

the Staff Officer ranks.[73] Smith-Barry's instructions were clear, as was his reporting line, which was reiterated to him. 'Your duties will be to assist and advise the American Aviation Service in regard to Flying Training, *always subject to the instructions given by Brigadier General Lee*.'[74]

Smith-Barry would see out the war in America and be transferred to the unemployed list early in February 1919.

History Repeated: Smith-Barry and the Second World War

A very telling episode in the Second World War raises further questions about Smith-Barry's character and reputation, but perhaps more importantly, also casts doubt on the veracity of materials used to justify his contribution to First World War training. Shortly before the second war, in July 1939, Smith-Barry took an Instructors Course at Brooklands.[75] The course did not lead to an immediate role in the RAF, and he wrote to Commandant CFS, Group Captain James Robb begging him, 'In God's name, give me something to do, in uniform or out of it.'[76]

Smith-Barry wrote to Robb again later the same month, enclosing two pamphlets he claimed were 'exact reprints with no further additions' of his materials from the First World War.[77] Robb, in turn, reached out to ex-No. 60 Squadron Harold Balfour, who was now Under-Secretary in the Air Ministry, stating, 'I received the attached yesterday from Colonel Smith-Barry, together with a private letter which makes it appear that he has not had very much good luck.'[78] Enclosed was a booklet entitled, '*Notes on Teaching Flying for the Instructors' Courses at No.1 Training Squadron, Gosport*. Several reasons suggest that Smith-Barry constructed this document for his 1939 proposal rather than it being an authentic document from 1917. He rather too neatly articulates almost all of the improvements throughout the School of Special Flying's life yet claimed it has been in operation for just '16 weeks'. Working backwards using Smith-Barry's timings implies a start date for the school of January 1917. While Smith-Barry returned to head No.1 Reserve Squadron at that time, the School of Special Flying was not approved until August 1917.[79] There is also the document's title, 'for the Instructors' Courses at No.1 Training Squadron' – there was no Instructor's Course at that time. Smith-Barry's pamphlet also claims, 'As both officers and men prefer to have the evenings free to any other part of the day, it has been made a rule here *during the summer months* to shut down every evening unless absolutely unavoidable.'[80] Such a claim is inconsistent with a document allegedly written in May, i.e. before the summer months.

Does any of this matter? At face value, such embellishments might seem trivial. However, such a re-writing of history matters for two reasons. Firstly, It was this retrospective document, along with two portraits, that was sent by Anne Smith-Barry to the CFS in 1950.[81] Anne claimed that was all that remained of Smith-Barry's work.[82] Air Commodore A.D. Selway, in a 1952 letter to Anne, stated, 'You know, of course, that Robert Smith-Barry is one of our household gods at CFS, and it is around his name more than any other that the tradition of the teaching of flying instruction revolves.'[83] The second reason is that Tredrey, and consequently, the historiography, has relied upon it as an authentic record of Smith-Barry's 1917 thinking.

The second pamphlet enclosed to Robb in 1939 was entitled '*School of Special Flying, Gosport. Results (Elementary Section), Miscellaneous Letters, c. November 1917.*' It contains eleven documents purported to have been written by Smith-Barry or his associates between November 1916 and November 1917.[84] Again, there are reasons to believe that this may be an edited edition of Smith-Barry's thinking despite the historiography also relying upon it. For example, he includes a document, 'Instruction of Scout and Other Pilots – Written in France, 10th November 1916,' which again rather too neatly articulates improvements that would later be made in training pilots. Curiously too, there is a footnote that reads, 'Added 21st November 1916 – On second thoughts, it appears to the writer that the best way to make use of the above principles would be to start a School for turning out Instructors in Flying, with the idea of all Instructors eventually going through it.' This research concludes that such uncanny foresight of what RFC leadership did a year later is staged. Smith-Barry's November 1916 memorandum survives in the National Archives and has no such addition adding further weight to evidence that this is retrospective.[85]

Some of the documents included in the second pamphlet can be substantiated against archival sources, and the evidence Smith-Barry used to demonstrate the success of the Special School of Flying is one element that can be examined. His evidence is preposterously weak to substantiate claims that his school was producing miracles. First, it is for the period 3 September 1917 to 11 November 1917. In other words, barely two months. The results are for 'elementary' training only and take no account of higher training. Finally, the accompanying statement, 'none of these officers had flown in any Machine whatever, except some who had done so as Observers,' has already been proven false.[86]

If there were any lingering doubts about when this material originated, there is no argument when a letter from Anne Smith-Barry to Bell-Irving of 4 September 1958 is considered. She indicates that she has mailed him copies of these two booklets. She states they are: 'The only things Bob said he had ever written about flying, also what he called his Puff Book with quotations about himself that he had printed. He did this in order to get a job in the last war.'[87] Tredrey placed absolute reliance on these documents in writing his book. In turn, Tredrey's book has become the source of almost all comments on training in the RFC during the First World War. The 'puff book' was sent to the CFS. Ultimately, a significant aspect of our understanding of First World War training has been built on documents created for Smith-Barry's job application in 1939.

From correspondence that year, it is clear that Balfour and Robb did ask Smith-Barry to send a proposal on training. While still in the process of constructing his proposal, the chances of it being a success were dealt a blow when his sponsor Robb was sent out to head training in Canada. Thanking Robb for his help, Smith-Barry wrote: 'I owe you a debt of gratitude for hospitably receiving me at the CFS and for all your help which has really started me going again. Without it, I should be on the bottom rung […], and indeed, now you are gone, that is probably where I should find myself.'[88]

Robb had attempted to coach Smith-Barry, advising him to submit a proposal for 'intermediate and advanced training' only. However, Smith-Barry ignored him and submitted a proposal that included all training. Smith-Barry's proposal, 'Memorandum on Flying Training,' was submitted on 10 October 1939.[89] The proposal is not dissimilar to Smith-Barry's 1917 submission on large flying schools. It is again long on 'statistics' and short on self-awareness. For a start, his data is 20 years old, and his proposals regarding efficiencies, even to the untrained eye, sound painfully naïve. However, Smith-Barry was pleased with it, and two days after submission, he wrote to Robb again thanking him for his assistance and enthusing, 'Balfour […] was quite pleased with it and has forwarded it to Portal.'[90]

Charles 'Peter' Portal had begun the First World War as a dispatch rider in the Royal Engineers and was commissioned in November 1914. Bored, he sought a transfer to the RFC in July 1915 as an observer. In early 1916 he began flying training, was appointed a pilot officer in April 1916 and in May, joined No.60 Squadron at a similar time to Smith-Barry They departed for France together on 25 May 1916. Their time in the squadron together was, as Portal's earlier letter had said, relatively short, and in July 1916, Portal moved to become a Flight Commander in No.3 Squadron. Unlike Smith-Barry, Portal remained with the RAF and rose swiftly through operational and staff positions. In October 1939, when Smith-Barry's proposal landed on his desk, he was at the Air Ministry as Air Member for Personnel.[91]

Smith-Barry's proposal was already in trouble. Again, as in the previous war, this was entirely due to his own failings. The events are captured in his letter to Robb on 24 October 1939. He confirms to Robb that he submitted his proposal on the 10th but now calls it 'a very hurried inaccurate version'.[92] It was forwarded to Portal the following day. Unsurprisingly, Portal forwarded it to other officers, no doubt for comment, including Arthur Longmore, who headed RAF Training Command and Lawrence Pattinson, who led No.23 Training Group, which included the Central Flying School. Smith-Barry had a series of uncomfortable meetings with the two of them. Leaving aside his questionable statistics, it transpired that in order to complete his proposal, Smith-Barry had made a series of unauthorised visits to Training Squadrons to obtain data. He had even written to Balfour directly and told him, 'I have obtained permission to visit several Flying Training Stations at each of which I have asked the same series of questions with a view to finding out what economies could really be made.'[93]

Now Smith-Barry's lie had embarrassingly come home to roost. He had never been granted such permission, and it got worse. To obtain access to the squadrons, Smith-Barry claimed that his friend, Robb, heading the CFS at that time, had granted him the approval, even putting such in writing to Balfour. Robb leaving for Canada left Smith-Barry's subterfuge embarrassingly exposed. He apologised to Robb, telling him, 'I told him (which was the case) that though you and I had indeed discussed making such visits, it was unfortunate that I had darted off and made them without your final sanction' and that 'I hope no harm will come of my excess of zeal & of your hospitality.' Again, on the 26 October, he wrote to Robb, 'I say I hope

I did not let you in it with those dam'd visits.'[94] He concluded, 'As to the thing being seriously taken up, I should think it's more than doubtful.'[95]

On 23 November 1939, Smith-Barry met with 'Portal, Pattinson & another of Pattinson's rank and 18 or 20 others.'[96] The meeting must have been a sobering experience. His proposal was shot down in proverbial flames. They had, he said: 'Not the least difficulty in proving that an economy of 50 per cent in aeroplanes was impossible. Nor was it thought necessary to discuss the possibility of any lesser economy.'[97]

Early in 1940, Smith-Barry wrote to Robb, not so much admitting defeat but blaming the recipients of his proposal for not appreciating it. He stated: 'As to my training schemes, though it would certainly be to the country's interest to carry them forward, I can think of no individual to whose personal interest it would be, so I think I've established a right to be left at peace in that quarter.'[98]

In December 1942, Smith-Barry wrote of these 1939 events in a letter to Bell-Irving: 'Do you want a copy of the rubbish? [his report] There is one - Balfour had it on Oct 10, just before he left. He flung it at Portal's head and told him it was a masterpiece & he was to do something about it. Portal and Co saw at once on which side their bread was buttered & decided to drown the kitten. But as it was such a distinguished kitten, let it be drowned with a band playing.'[99]

In the event, Smith-Barry joined the RAF in April 1940, not in any training capacity but as a ferry pilot. This activity was cut short by the previously mentioned October 1940 accident, which earned him a stay in the famous Guinea Pig Hospital in East Grinstead.[100] As suggested, even this accident was not what it seemed. While C.G. Grey wrote that 'he landed […] when his engine quit on him,' Vincent's private letter to Bell-Irving reveals that: 'The poor old boy was caught in low cloud and high trees while delivering a Bristol Blenheim, which was too heavy and fast for him, not really knowing the blind instruments etc., and he tried to keep in visual conditions, but he and the cloud and the trees all met up together, and that stopped his delivery trips.'[101]

His 'retirement' in 1943 was also not without controversy. In August that year, Smith-Barry wrote to Bell-Irving telling him, 'In June I retired according to plan and am now a civvy in a houseboat on a lake'.[102] However, in 1945, he told a personal friend, Ramsay, 'Leigh Mallory sacked me so quick - he never said why'.[103] The truth was that Smith-Barry had been sent to India as a ground instructor after recovering from his accident. After his crash, he was expressly grounded. The story recounted by Smith-Barry's friend and former colleague in India, Duncan Stone, too late for Tredrey's book in 1979 was that: 'It was not long before Smith-Barry asked for an aeroplane to fly. The Air Ministry, by then, had proclaimed him Non-general duties, which we were all aware meant that he was not allowed to pilot one of His Majesty's aircraft. [They phoned around asking what to do, and a Flight Commander said] if Smith-Barry wished to have an aircraft, the flight was on no account to be entered in the Flight Log Book. […]

When he flew, he always refused to wear a parachute but kept an old brown cushion embroidered with fading red initials SB on one side, which he kept in his office […] usually no helmet or goggles so that no one could get in touch with him from the ground.'[104]

Whether Leigh-Mallory caught wind of his antics is unknown, but according to Stone, when Smith-Barry pestered London to create an Indian Flying School, and it was turned down, he retired. To the end, Smith-Barry could not deal with authority.

A Short Reassessment of First World War Pilot Training

If that is the story of Smith-Barry, what is the truth regarding pilot training in the First World War? The historiography is largely unanimous. Between 1914 and 1917, it was 'insufficient', 'inadequate', 'reprehensible', and even 'murderous'.[105] In 1917, the consensus goes, with the arrival of Smith-Barry, training significantly improved, lives were saved, and directly as a result of his input, things were much improved in 1918. The research on which this article is based demonstrates that the reality is much more nuanced.

When war came, the RFC had prepared well for mobilisation overseas. It also practised many tactical deployment aspects at a comprehensive gathering, a so-called 'Concentration Camp', in June 1914. Despite this practical preparation, due to the expectation that war would be violent but short-lived, there was no consideration given to how to grow and train the Corps. Consequently, when the RFC departed to join the British Expeditionary Force, it left behind an organisation bereft of both aeroplanes and manpower. Further, while the RFC had a lengthy waiting list of applicants from both the infantry and civilians, there was little of a training system for them to pass through. Barely more than twenty men had completed a Central Flying School course in the seven months before the outbreak of war, and it took several weeks before the RFC in Britain could obtain a few pilots from France to assist in training new reserve squadrons.

The RFC were the victim of their own success. They had proved their worth in weeks, and consequently, Field Marshal French demanded more squadrons.[106] With few resources and lacking an organisational plan, early training efforts were confused and haphazard. A combination of the CFS, reserve squadrons, and service squadrons was called upon to train new pilots and aid expansion. Whilst the actions of the RFC in Britain were pragmatic in their approach, the lack of clarity regarding how big the force would need to be, coupled with aeroplane supply issues beyond their control, would dog the force for over a year. With casualties low and growth manageable, however, the RFC found a way to train its pilots.

As the growth of the force accelerated, the RFC's training efforts improved radically with the arrival of John Salmond in early 1916. He, and his Chief Staff Officer, Guy Livingston, were quick to deduce that the training standards and policies were no longer fit for purpose. The first set of minimum training standards was agreed upon in a March meeting that included Trenchard and other senior officers.[107] With these in place, structure was added to the organisation, and a

new certification process was introduced that logically broke the training into three parts. The first of these parts was classroom-based instruction, and new schools were opened at Reading and, three months later, Oxford to accommodate the activity. A new syllabus, new exams and stringent oversight by the CFS were also added, and within a month of Salmond and Livingston's arrival, the future training architecture had been implemented.

A new minimum of fifteen hours solo flying time was introduced in this new standard. Historians have criticised the number as way too small. However, the standard introduced after this March 1916 meeting was never an end goal. The minimum number was increased feasible to twenty in November, and archival records show there was a desire to increase this further as soon as possible.[108] Ultimately, this proved not to be the case in 1916 due to a lack of aeroplanes. As the RFC scrambled to expand in the face of demand from France, the lack of training aircraft limited the number of men that could be pushed through the system. Under pressure from Haig, demand for men in France remained Trenchard's principal focus. On occasion the only way to achieve this was to squeeze the training system. That said, while the historiography's conclusion is overwhelming - that the system responded by sending inadequately trained men to France – many records do not support this view.

Unsuitable men were weeded out of the force rather than pushed on to France. Appraisal reports and new exams were tools to prevent the incapable from being sent overseas. The training was continued in squadrons in France if needed, where paternal commanding officers ensured that men received as many days of additional training as possible before they flew an active mission. Finally, when men did slip through the net and arrived in France without adequate skills, complaints were made by officers in the Field. These complaints were not met with platitudes by the training organisation. In all cases found, they were followed up vigorously and occasionally pointedly until reasons for the failure were ascertained. Where an issue was systemic, processes or syllabi were changed to prevent reoccurrence.

Of course, it is easy to sit back in judgement with the benefit of 100 years of history and to declare training in this period was 'inadequate' or 'insufficient'. Were fifteen hours solo too little? Twenty? No one can answer that, but it was the best minds in British military aviation at the time that decided upon this number. It was a recognised compromise that balanced pilot competency with the demand from the British Expeditionary Force (BEF). Had training hours been extended, the BEF would have gone short of the support it needed. Such a solution would have handed the German Army a huge advantage and was never seriously entertained.

On 1 January 1917, the RFC decentralised its Training Brigade. Three new regional administrative centres called Group Commands were created and headquartered at Adastral House in London. Northern Group Command was established at York, Eastern in London and Southern at Salisbury. In August of that year, the Training Brigade became the Training

Division. Effective 1 April the following year, on the creation of the RAF, the Directorate of Training came into being. In truth, this organisation had been operating for some time before the announcement, concerning itself with questions of policy and standardisation given the impending changes. On 28 April 1918, a conference was held to discuss the transition of heritage organisations. Consequently, effective 8 May, the training brigades and group commands were rearranged again so that their units now fell into one of five new Areas.

The Areas were given significant autonomy, each to be commanded by a Major-General, directly responsible to the Air Ministry. These Areas began to take over the myriad of administrative responsibilities, which from 20 May would include the allotment of aeroplanes and the posting of pupils for elementary instruction. The allocation of pupils to special schools was managed directly by the Directorate of Training at the Air Ministry. The administration of the training infrastructure was significant, and the management and recording of personnel as they travelled through the organisation was vital. Daily telegrams were demanded from each school, detailing who was under instruction and the likely duration of their stay. Similarly, daily wires were required from each Area detailing the number of places they required at each school.[109]

Throughout much of 1917, the RFC had arguably its most capable administrators in their best roles, yielding a level of planning and efficiency that greatly enhanced the capabilities of the training establishment and the RFC in general. Livingston astutely noted in his autobiography after the war: 'It was found that a good flying officer was frequently only a tolerably good flight commander, an indifferent Squadron Commander and a bad Wing-Commander, due to the fact that the characteristics necessary for fighting in the air are very different from those required for executive command in the Field. […] it presented a very real difficulty in providing squadron and wing commanders to meet the requirements of our rapid expansion. The administrative work necessitated our keeping in constant touch with the various Army Commands throughout the country and working in close liaison with them.'[110]

However, the RFC and later RAF were blessed, or downright lucky, to find themselves with some extraordinarily effective administrators. John Salmond, who had commanded the Training Brigade since July 1916, became General Officer Commanding (GOC), Training Division in August 1917. Salmond's star was very much in the ascendency. He was to move briefly to become the Director General of Military Aeronautics at the War Office on 18 October 1917, replacing David Henderson. Then, in January 1918, he took over from Trenchard as the GOC RFC in the Field.[111] It is implausible that Salmond would have ended up commanding the RAF had he not been viewed at the War Office to have done an exemplary job in helping grow and equip the Corps.

Throughout Salmond's role in training, he was ably assisted by his Chief Staff Officer, Guy Livingston. Livingston followed Salmond to London when the latter was promoted. Sefton Brancker, who had worked tirelessly since the start of the war, became Deputy

Director-General of Military Aeronautics in February 1917. Though he wished to command operationally, when he did so, his position as Commander of the RFC in Palestine was short-lived. He soon returned to London, where his organisational ability was better used. First, he became Controller-General of Equipment and, finally Master-General of RAF Personnel. Thus, Salmond, Brancker and Livingston provided command continuity throughout a significant period of the war.

The training organisation was also assisted by the addition in November 1917 of experienced Wing Commander Edgar Ludlow-Hewitt, who had returned to England in a newly created role as Inspector of Training at the Training Division. He was later promoted to GOC Training Division, but this appointment proved unhappy due to the series of political machinations involving Smith-Barry. In Ludlow-Hewitt's place, John Hearson, who had succeeded Livingston as Chief Staff Officer at the Training Division in October 1917, provided much-needed continuity, taking over the command of the Training Division for the remainder of the war.

Before leaving the Training Division, Livingston undertook the RFC's first strategic planning and forecasting exercise. Uniquely, he gathered together all elements of aeroplane and manpower demand and supply, factored them into a single plan, and widely shared it across the Corps. As can be imagined, in a paper-based world, this was a monumental but arguably well-overdue task. It required someone of Livingston's organisational nous and tenacity to complete it. He involved the aircraft manufacturers, the Ministry of Munitions and operational leadership in England, France and the Middle East. From the bottom up, he calculated aircraft availabilities with suppliers, manpower numbers and pilot output from the Training Division to produce a detailed deliverables timeline. Thus, when a change was demanded from the Field, or a delay happened at a manufacturer, the effects could be factored into the plan. Called simply the 'Programme of Development', the output was a detailed picture of future requirements and delivery dates.[112] When the Royal Naval Air Service (RNAS) and RFC merged in April 1918, the RNAS's requirements were similarly built into the plan, initially inherited by Brigadier General John Hearson and later the office of the Master General of Personnel.

Hearson played an active role in late 1917 and 1918 in increasing the effectiveness of the training machine.[113] He did this through the widespread and accelerated adoption of the Training Depot Station system. These 'All-Through' squadrons, so called because the Elementary and Higher training took place in the same unit, were aggressively pushed. Instructional improvements, some of which were initiated by Smith-Barry, were adopted. Salmond and Hearson oversaw the ending of the chopping and changing of instructors, allowing a more settled relationship between instructor and pupil. The number of pupils allotted to each instructor would be 'slowly reduced' to a maximum of six.[114] Each instructor would have a mix of pupils at the various stages of instruction, so no instructor had more than half of his pupils undertaking dual elementary instruction at any time. This instructor would now be responsible for a pupil throughout his entire instruction, building more trust and a better relationship.

During the latter years of the war, the vast majority of pilots were civilians, and the creation of the Cadet Brigade was an important development. Initially created as the Officer Cadet Battalion in February 1916 to train selected officers from the Infantry, the Battalion was expanded to become a Wing in its own right with four squadrons of one hundred men each in October 1916. At this point, the RFC announced that all non-officers joining the Corps, whether from the infantry or civilian life, would join this new Wing.[115] Here they would learn the basics of military service, including drill and map reading. Though drill was rarely popular, most men recall that instruction was interesting and challenging.[116] The scheme was deemed a significant success, with men moving on to the Schools of Aeronautics better prepared for future training.

While the RFC had been able to choose recruits carefully through much of the war, by 1918, things were markedly different. The academic abilities of new cadets became such that in the summer of 1918, the RAF went so far as to recruit several schoolmasters to the Cadet Brigade to lecture arithmetic.[117] At this stage, the Directorate of Training decided to opt for a character-based assessment of cadets rather than relying solely on academic ability for officer selection. Consequently, cadets would be measured on their sporting prowess, aptitude for leadership, character, keenness, and technical proficiency, as well as academic ability. The merger of the RFC and RNAS in April 1918 required the unification of much of the cadet's training curriculum. Brigadier General A.C. Critchley was seconded from his role leading training in the Canadian Corps to take command of the RAF Cadet Brigade.[118] With significant personal experience and joined by some of his trusted administrators, Critchley was a useful addition to the team in Britain.

The last eighteen months of the war saw the creation of a myriad of specialised schools to assist in the training of pilots. Perhaps the most pressing training development need throughout the war was in the use of gunnery. The concept of fighting for aerial supremacy in the air pre-dated the war. As aircraft capabilities improved, the first School of Aerial Gunnery opened in late 1915. There has rightly been criticism of the RFC for not adding additional gunnery schools in 1916.[119] However, this research found that the RFC did attempt to build a new site at this time, but a poor site selection led to the project ending in expensive failure.

Consequently, the RFC remained with only one gunnery school at Hythe until January 1917, when a second at Turnbury was finally added. The new school became dedicated to the training of scout/fighter pilots. One hundred and fifty pilots a fortnight were to be sent to the school after they completed their Higher Training. Following the opening of this second school, the first focussed on the training of observers, or 'aerial gunners' as they became known. Another school of gunnery was added at Aboukir in Egypt in April 1917 before, in August, a third British school was formed near New Romney airfield on the Kent coast. A month later, the RNAS added its first dedicated gunnery school at Frieston, Lincolnshire.

Schools of Aerial Gunnery should not be confused with Schools of Aerial Fighting though their purposes are complementary. While the former focussed on the ability to use, aim and fire the

machine guns, the latter focused on the latest tactics regarding manoeuvre and fighting. The first concrete steps towards improving the training of fighting in the air came on 17 September 1917 with the approval of a School of Aerial Fighting at Ayr Racecourse, just down the coast from the Turnbury school. No sooner had the operation for 150 pupils begun than it was clear that demand for places would outstrip this school too. On 11 October 1917, approval was given to form the No.2 School of Aerial Fighting at Driffield, Yorkshire, which became operational on 28 February 1918.

Whilst gunnery and fighting schools were being added, Smith-Barry's school, the School of Special Flying, was approved in August 1917. The profound change that emanated from the Special School of Flying, that would have revolutionised capabilities had the war continued into 1919, was the recognition of the importance of training the trainer. Thus, the essential Smith-Barry improvement became the seeds sown for the standardisation of instructor abilities through their dedicated training. All instructors, whether an experienced combat pilot back from France or a rookie who had just qualified, had to pass through an instructor's course at Gosport. Over time, the School of Special Flying was renamed an Instructor's School, and in the latter months of the war, others opened in each RAF Area.

Following Smith-Barry's removal during April and May 1918, the two existing fighting and gunnery schools were merged into Schools of Aerial Fighting and Gunnery.[120] At the end of May, the schools simply became No.1, 2, 3 and 4 Fighting Schools, respectively. Also in May, the Gosport School of Special Flying became the No.1 School of Special Flying as a second was added at Redcar. Further regional instructor schools followed in July and August. The work done at these schools, whilst essential, came too late in the war to significantly affect its results. The amount of time a man spent in training meant that improvements would only have been truly felt in 1919.

The pilots who flew the reconnaissance and artillery observation aircraft that comprised the bulk of the RFC and RAF are often ignored. Their training also benefited from the opening of new dedicated schools. Wireless capabilities, predominantly regarding the learning and transmitting of Morse messages, had been taught at Schools of Aeronautics since their creation in late 1915 and early 1916. This instruction had been complemented by a Wireless School, which in October 1916 became known as the Wireless and Observers School at Brooklands. No further progress was made until November 1917, when a new school was spun out of the existing Brooklands school, becoming the Artillery & Infantry Co-operation School. The following day, 8 November 1917, No.2 Wireless School opened, and in January 1918, further specialist training was concentrated at a new School of Navigation and Bomb Dropping formed at Stonehenge.

An 18 October 1918 memorandum from Director of Training John Hearson shows that the RAF training system was meeting the demand for service squadrons and that planning was in full swing to increase throughput by a further 60 per cent to meet 1919 estimates.[121] In June 1916,

the RFC produced some 203 pilots for active service. In March 1917, this figure rose to 388; a year later, in March 1918, 1,082 new pilots were produced. In the final month of the war, 1,220 new pilots completed training.[122] The intake capacity of the system had become 3,000 cadets a month.[123] To support this throughput, the size of the training organisation had become immense. The RAF operated Training Depot Stations out of almost 70 airfields across Britain, which employed 2,800 officers, 22,700 other ranks and 11,800 women. Together, they had a training capacity of 9,500 pilots, and almost 3,800 aeroplanes were at their disposal.[124] The system had expanded sufficiently by 1918 to allow men to spend ten to eleven months in training. It was rare for any man to head to France with less than 50 to 60 hours minimum flying at the war's end.

Conclusion

This article explored the role of Smith-Barry in the First World War. When Smith-Barry returned to Gosport to head No.1 Reserve Squadron at the beginning of 1917, Salmond and Livingston sought to solve the manpower crisis by finding efficiencies within their organisation. No doubt Smith-Barry's ideas regarding training efficiencies and new methods would have played well with these senior officers. Initially, the new entity was to be named the School of Special Flying 'to teach specially selected pilots all the tricks and aerobatics in flying which have proved of use in aerial fighting.'[125] This soon changed, and the school focussed on instructors. This aspect is the most important of changes that emanated from this school but there is little evidence that he initiated the change, and indeed as this article has shown, it did not align with his ambitions. Repeated papers show he hoped to lead new enlarged schools that incorporated all aspects of training on the ground and in the air.

To briefly address the remaining BBC points, Smith-Barry did not produce a 'training manual', though his Gosport notes were distributed in late 1917. Two RFC manuals were produced in 1914 and 1915. They were replaced by a significant numbers of official training pamphlets. Smith-Barry was not responsible for any of them. The 'Gosport Tube' was developed by a combination of efforts led by Capt. Alan Scott.[126] Finally, half of all pilots did not die in training. Other research connected with this article has shown that actual figure is closer to half of that and was no worse than training in the Second World War. There is also no evidence that Smith-Barry's initiatives saved training lives. In fact, more aggressive training probably increased the peril but produced better trained pilots who could face the perils of France.

This research also concludes that Smith-Barry was a man entirely unsuited for senior command. His ideas may have improved British pilot training, but he was unfit to lead a large organisation. As Livingston wrote: 'Other qualities besides a genius for training pilots were required for such a command - in particular, knowledge of Staff duties, power of organisation etc., and it must also be realised that Smith-Barry was a comparatively junior officer.'[127]

While Smith-Barry may have inspired loyalty from many of those he commanded, his inability to accept his limitations ultimately soured his legacy in the RAF. His decisions in both wars

to go around his senior officers, ignore command structures, deliver proposals different from those requested, and not accept no for an answer marked him down as untrustworthy.

Ultimately, no one man taught the world to fly. As this article has shown, Smith-Barry was one cog in a gigantic training wheel, a wheel that required management by skilled administrators. In later years, Smith-Barry disclaimed having made the system himself, saying he had 'only done the donkeywork, others improving on it. I merely wrote the alphabet', he said, 'others wrote the classical works.'[128] He was, he said, 'only a drag on the wheel at Gosport' though he added no doubt with a smile, 'Never mind. I got most of the credit anyway.'[129] His legacy as the 'man who taught the world to fly', appropriate or not, lives on for now.

Notes

[1] 'Blue Plaque for WWI Pilot Robert Smith-Barry in Gosport' available at https://www.bbc.co.uk/news/uk-england-hampshire-26952538, 9 April 2014.
[2] F.D. Tredrey, *Pioneer Pilot: The Great Smith Barry who Taught the World How to Fly* (London: Peter Davies, 1976), p. 113.
[3] 'A Reunion of Aviators - 'Gosport' Pilots – Reminiscences at Brooklands' in *Hampshire Telegraph* (15 July 1938, p. 20).
[4] Article in the *Roundel*, a Canadian magazine found in RAFM:B3310 - *Correspondence and research docs re AD Bell-Irving's proposal for book on Smith-Barry 1937-1963*.
[5] For example, 'Father of Flying Training' in *Forfar Dispatch* (2 May 1940, p. 4), *Shields Daily News* (2 May 1940, p. 3), *Londonderry Sentinel* (2 May 1940, p. 6), *Belfast Telegraph* (1 May 1940, p. 5), and *Portsmouth Evening News* (1 May 1940, p. 4).
[6] Ibid.
[7] RAFM:AC71/9/18 – *Correspondence and articles relating to career of Lt Col RR Smith-Barry 1912-1963*, Central Flying School – 40th Anniversary 1912-1952
[8] Ibid, Letter from Lowry Coles to Group Captain G.T. Jarman, CFS, 22/9/1950.
[9] G. Lewis, *Wings Over the Somme 1916-1918* (Wrexham: Bridge Books, 1994 [1976]), p. 80.
[10] N. Macmillan, *Into the Blue* (London: Duckworth, 1929), p. 8.
[11] N. Macmillan, *Into the Blue* (London: Grub Street, 2015 [1969]), p. 193.
[12] NA:AIR 1/2397/265/1 – *Report by Captain Gilchrist on the Special School of Flying, Gosport*.
[13] Ibid.
[14] Ibid.
[15] G. Livingston, *Hot Air in Cold Blood* (London: Selwyn & Blount, 1928), p. 99.
[16] N. MacMillan, *Sir Sefton Brancker* (London: William Heinemann, 1935), p. 138.
[17] A. Boyle, *Trenchard: Man of Vision* (London: Collins, 1962), p. 202.
[18] Tredrey, *Pioneer Pilot*, title page.
[19] RAFM:X003-7892/071 – Memoirs of Major SE Parker.
[20] RAFM:B3310 – Letter from Alan Duncan Bell-Irving (ADBI) to Tredrey 9/7/1962.
[21] Ibid. Letter from ADBI to Tredrey 9/7/1962.
[22] Ibid. Letter from ADBI to Anne Smith-Barry, 29/5/1958.
[23] Ibid. Letter from ADBI to Quentin Russell, 9/6/1958.

[24] Ibid. Letter from Anne Smith-Barry to ADBI, 22/6/1958.
[25] Ibid. Letter from Charles Portal to ADBI, 23/7/1958.
[26] Ibid. Letter from Anne Smith-Barry to ADBI, 4/9/1958.
[27] Ibid. Letter from Stanley Vincent to ADBI, 15/4/1959.
[28] Ibid. Letter from ADBI to Tredrey, 9/7/1962.
[29] Ibid. Letter from Tredrey to ADBI, 12/2/1965.
[30] A.J.L. Scott, *Sixty Squadron R.A.F: A History of the Squadron from Its Formation* (Oxford: Casemate, 2016 [1920].
[31] RAFM:DC74/181 – *Duncan 'Bunny' Stone 'Personal Memories for Dr J Tanner of The Late Col RR Smith-Barry*.
[32] Oxford Directory of National Biography at **https://www.oxforddnb.com/display/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-72242** and Tredrey, *Pioneer*, p.3.
[33] Database of 1914 officers created from names listed in W. Raleigh, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force: Vol. I* (London: Hamish Hamilton, 1961[1922].
[34] T. Henshaw, *The Sky Their Battlefield II: Air Fighting and Air Casualties of the Great War. British, Commonwealth and United States Air Services 1912 to 1919* (Barnet: Fetubi, 2014 [1995]), p. 359.
[35] Findmypast, *Service Records 1912-1920*, Robert Raymond Smith-Barry.
[36] RAFM:AC71/9/18 – *Further Remarks on Instruction in Flying - Written in France 10th December 1916*.
[37] Tredrey, *Pioneer Pilot*, p. 52.
[38] Ibid.
[39] NA:AIR1/2397/265/1 – Gilchrist.
[40] NA:AIR1/2126/207/77/3 – Copy of Pamphlet, 'General Methods of Teaching Scout Pilots'.
[41] NA:AIR1/2397/265/1 – Gilchrist.
[42] RAFM:AC71/9/18 – Notes on Teaching Flying for the Instructors' Courses at No.1 Training Squadron, Gosport – May 1917.
[43] NA:AIR1/2126/207/77/3 – General Methods.
[44] NA:AIR2/12/87/Schools/174 – *School of Special Flying RFC. Gosport: Formation and establishment*.
[45] Ibid.
[46] J. Laffin, *Swifter than Eagles: A Biography of the RAF, Sir John Salmond G.C.B, C.M.G, C.V.O, D.S.O* (London: William Blackwood, 1964), p.80.
[47] NA:AIR1/2126/207/77/3 – General Methods.
[48] RAFM:AC71/9/18 – Notes on Teaching Flying.
[49] It is worth noting that many other suggestions were not taken forward, for example, the abandonment of minimum flying hours before qualification.
[50] Findmypast, *Service Records 1912-1920*, R.R. Smith-Barry.
[51] RAFM:X003-7892/071 – *Parker*.
[52] D. Winter, *The First of the Few: Fighter Pilots of the First World War* (London: Penguin, 1983

[1982]), p. 32.
[53] Salmond would replace Trenchard as GOC RFC in the Field in January 1918.
[54] NA:AIR1/720/35/17 – *Report on Flying Schools (French) and the Economy in Personnel they Effect*.
[55] Ibid.
[56] Ibid.
[57] Ibid.
[58] NA: AIR 1/720/35/16 – *Report on Proposed Large Flying Schools*.
[59] NA: AIR 1/14/15/1/49 – *Schools of Aeronautics and Cadet Brigade – Conferences of Commandants and Chief Instructors*.
[60] NA:AIR2/12/87/Schools/174 – School of Special Flying.
[61] Tredrey, *Pioneer*, p. 79.
[62] Ibid. p.81.
[63] RAFM:X003-7892/071 – Parker.
[64] Boyle, *Trenchard*, p. 264.
[65] RAFM:AC71/9/18 – Correspondence and articles.
[66] RAFM:X003-7892/071 – Parker.
[67] Boyle, *Trenchard*, p.266.
[68] Ibid.
[69] RAFM:X003-7892/071 – Parker.
[70] Ibid.
[71] Ibid.
[72] NA:AIR1/402/15/231/43 – *Directorate of Military Aeronautics' Records – Vol. XIII*.
[73] Findmypast, *Service Records 1912-1920*, Charles Frederick Lee.
[74] Author's emphasis. NA:AIR1/402/15/231/43 - Records Vol. XIII.
[75] RAFM:AC71/9/18 – Correspondence and articles.
[76] Ibid.
[77] Ibid.
[78] Ibid.
[79] Findmypast, *Service Records 1912-1920*, R.R. Smith-Barry.
[80] Authors emphasis. RAFM:AC71/9/18 – Correspondence and articles.
[81] RAFM:AC71/9/18 – Letter from AVM EJ Kingston-McCloughry, HQ 38 Grp, RAF, Upavon to Group Capt. G.T. Jarman, CFS, 22/9/1950.
[82] Ibid.
[83] RAFM:AC71/9/18 – Letter from ADBI to Stanley, 30/7/1958.
[84] RAFM:AC71/9/18 – Correspondence and articles.
[85] NA:AIR1/997/204/5/1241 – *Training of Pilots and Observers 25 Oct 1915-22 July 1917*.
[86] RAFM:AC71/9/18 – Correspondence and articles.
[87] Ibid. Letter from ASB to ADBI, 4/9/1958.
[88] Ibid. Letter from Robert Smith-Barry to Robb, 'Late October, 1939'.
[89] Written by Smith-Barry and his former chief mechanic Dundas Heenan.
[90] RAFM:AC71/9/18 – Letter from RSB to Robb, 12/10/1917.
[91] https://www.rafweb.org/Biographies/Portal.htm. In October 1940, Portal would become

Chief of the Air Staff.
[92] RAFM:AC71/9/18 – Letter from RSB to Robb, 24/10/1939.
[93] Ibid. Letter from RSB to Private Secretary, HM Under-Secretary of State for Air, 1/10/1939.
[94] Ibid. Letter from RSB to Robb, 24/10/1939.
[95] Ibid.
[96] Ibid. Letter from RSB to Robb, undated but filed under 1940.
[97] Ibid.
[98] Ibid.
[99] Ibid. Letter from RSB to ADBI, 13/12/1942.
[100] https://www.eastgrinsteadmuseum.org.uk/patients/robert-smith-barry.
[101] RAFM:B3310 – Letter from Vincent to ADBI, 14/4/1963.
[102] Ibid. Letter from RSB to ADBI 29/4/1943.
[103] RAFM:AC71/9/18 – Letter from RSB to Ramsay, 17/2/1946.
[104] RAFM:DC74/181 – Duncan Stone Memories.
[105] For example, see S. Douglas, *Years of Combat* (London: Collins, 1963), A.G. Lee, *No Parachute* (London: Arrow, 1969[1968]) and *Open Cockpit* (London: Grub Street, 2012 [1969]), R. Barker, *The Royal Flying Corps in World War I, From Mons to the Somme* (London: Robinson, 2002 [1994]), R.A. Morley, *Earning Their Wings: British Pilot Training 1912-1918* (MA Dissertation, University of Saskatchewan, 2006) amongst many others.
[106] NA: AIR 1/143/15/40/316 – *R.F.C. expansion policy - completion in personnel and material of 1,7 and 8 Squadrons, and authority for formation of 9 and 12 Squadrons*.
[107] NA: AIR 1/131/15/40/218 – *Pilots sent to Expeditionary Force with insufficient training. General training of pilots*.
[108] NA: AIR 1/131/15/40/218 – Letter from Brancker to Lt. Col. Burke, March 1916.
[109] NA:AIR1/676/21/13/1840 – *Notes on Flying Training at Home*.
[110] Livingston, *Hot Air*, p. 105.
[111] Effective 1 April 1918, this became GOC RAF in the Field. Trenchard moved to head the new Independent Force which focussed on long-range bombing.
[112] Livingston, *Hot Air*, p. 103 and NA:AIR1/31/15/1/156 - *Training programme of development*.
[113] NA:AIR1/676/21/13/1840 – Training at Home.
[114] Ibid.
[115] H.A. Jones, *The War in the Air: Being the Story of the part played in the Great War by the Royal Air Force: Volume Six* (Naval & Military Press, 2002 [1936]), p. 298.
[116] For example, R. Vee, *Flying Minnows: Memoirs of a World War One fighter pilot* (London: Naval & Military Press, 2019 [1935]), p. 21.
[117] NA:AIR1/14/15/1/49 – Conference of Commanders and Instructors.
[118] NA:AIR2/114/RU4041 – *Cadets General Classification and Procedure of Cadet's Course Canada*.
[119] NA: AIR 2/9/87/7661 – *Enquiry into the Administration of the R.F.C, 1916*.
[120] See Appendix Three.
[121] NA:AIR1/33/15/1/196 – *Training Depot Stations establishment of, and output of pilots from*.
[122] NA:AIR1/683/21/13/2234 – *Précis*.
[123] NA:AIR1/686/21/13/2252 – *Statistical data*.

[124] Compiled from NA:AIR1/452/15/312/26 *Vol. I & Vol. II*.
[125] NA:AIR2/12/87/Schools/174 – *School of Special Flying*.
[126] Duncan Bell-Irving credited A.J.L Scott with the development after earlier experiments by NCOs.
[127] Livingston, *Hot Air*, p. 136.
[128] 'A Reunion of Aviators- 'Gosport' Pilots – Reminiscences at Brooklands' in *Hampshire Telegraph* (15 July 1938).
[129] RAFM:B3310 – Letter from RSB to ADBI, 18/7/1937.