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Global Networks Before Globalisation: Imperial Airways and the Development of Long-Haul Air Routes

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Abstract

From its formation in 1924 to its takeover in 1940, Britain's Imperial Airways forged a network of long-distance air routes around the world that knitted the British Empire together by air for the first time and paved the way for a new age of aeromobility. While transport historians have long recognised the importance of these early services to the administration of Empire and the future development of international civil aviation, the unique spatialities of Imperial Airways' services have received scant geographical attention. By charting the expansion of Imperial's international route network in the 1920s and 1930s, this paper provides an insight into the formation and operation of a global aerial network that helped usher in a new era of globalisation.

ORIGINS OF AN AIRLINE

Britain 's Imperial Airways was formed on 31 st March 1924 and charged with developing air routes to British colonies and interests in Africa, the Middle East, the Indian subcontinent, the Far East, and Australia (Veale 1945; Porter 1991). Operating as a privately owned monopoly, albeit one subsidised by the British Government, Imperial expanded quickly. By 1938, the company was flying nearly 25,000 route miles and offering eight flights a week to Egypt, five to India, three each to East Africa, Malaya, and Australia, and two each to South Africa and Hong Kong (Finch 1938). Yet despite Imperial Airways' leading role in the formation of early global air routes, the British were initially quite reluctant aviators and though Wilbur and Orville Wright had performed the world's first heavier-than-air powered flight at Kill Devil Hills, Kitty Hawk, North Carolina, in December 1903, the British Government and scientific establishments were sceptical of their claims and dismissed the existence and future potential of powered flight (Grant 2003).

The French, meanwhile, were more enthusiastic and, in July 1909, Louis Bleriot became the first man to fly the English Channel. However, his pioneering flight inadvertently raised some difficult geopolitical questions concerning the rights of aircraft from one state to use the airspace above another. As Dargon (1919 p146) noted, 'whereas other vehicles…are compelled to keep to existing tracks, aircraft are free to manoeuvre in space and can rapidly and easily surmount all obstacles which have hitherto constituted effective barriers to other forms of locomotion'. According a representative of the Parisian Aerial League, "Before five years are out, England will have ceased to be an island" (cited in Sampson 1984 p23). This new vulnerability to aerial attack alarmed the British Government and, as aircraft threatened the integrity of their national borders, individual states felt compelled to defend themselves against uninvited or hostile 'winged visitors' though a collection of hastily formulated aerial legislation (Brittin and Watson 1972).

Providing a pilot took off, flew within a state's navigable airspace and landed within its national borders there was no problem, but the challenge international services posed to the territorial integrity of individual states produced one of the longest and most acrimonious debates in aeronautical politics, with each nation-state seeking to cede as little and seize control of as much airspace as possible, manipulating international agreements governing economic regulation for their own commercial advantage, while seeking to maintain control over their borders for reasons of defence

and national security (Petzinger 1995). Tentative attempts at airspace regulation had occurred in 1900, but the first coherent attempt to bring international aviation under unified control occurred at Paris in 1910, but the mutually incompatible visions held by the representatives of different aerial nations meant that unanimous agreement on the use and regulation of airspace was not forthcoming. The British delegation vehemently opposed French and German proposals for complete freedom of the air and argued that airspace was capable of private dominion and ownership (Veale 1945; Cheng 1962).

In 1911, the British Aerial Navigation Act declared that all of Britain 's airspace, including that of her colonies and dominions, was sovereign territory and therefore inviolable (Butler 2001). This assertion of aerial sovereignty frustrated French and German attempts to begin flights over British territory and gave the British valuable time in which to bring their own air industry up to continental European standards. The idea of an Imperial air route came into being on September 9 th 1911, when, to commemorate the coronation of King George V, an experimental airmail service was flown from Heston aerodrome to Windsor Castle (Salt 1930).

At the outbreak of war in 1914, it was not thought that aircraft would play a significant role in the conflict but, four years later, Britain possessed the largest aircraft manufacturing industry in the world. With a glut of serviceable aircraft and trained aircrew becoming available after the Armistice, a number of demobbed pilots organised themselves into airlines to begin operating on a commercial basis. However, despite the enthusiasm of a few entrepreneurs, the British Government did not see the potential for civil aviation, and civilian flying was not authorised until 1919.

In April that year, a proving flight was made between Heston and Le Bourget aerodrome near Paris, and on 25 th August 1919, an aircraft belonging to the British company, Air Transport and Travel (AT&T), left Hounslow for Le Bourget on what was the world's first scheduled international passenger service (Davies 1964). Vigorous cross-Channel competition began in earnest between British, French, Belgian and Dutch carriers later that year but, unlike their continental competitors, British companies received no state subsidy or support, with the then Secretary of State for Air, Winston Churchill, famously declaring that "civil aviation must fly by itself" (cited in McCormack 1989 p377).

Such expressions of parsimony hindered the growth of the fledgling British airline industry and many pioneering carriers soon declared bankruptcy. In 1921, in an effort to highlight the unequal regulatory environment, Britain 's Handley-Page Transport and Instone Air Line suspended operations on the London-Paris route (Instone 1938). The strike forced a change of Government policy and, with the promise of state support, services were resumed within a month on a mutually cooperative basis (Walters 1979). Yet despite the injection of state subsidies, both carriers struggled to become viable commercial enterprises, as inclement weather over the Channel often disrupted flights and forced passengers to travel by train or ship (ibid. 1979).

SKYWAYS TO EMPIRE

By the end of the First World War, Britain 's empire had attained unprecedented geographical size. The nearest point was 1500 miles away from Britain, and the furthest some 12,000 miles away and linking these territories by air became increasingly important following the destruction of Britain 's maritime fleet during the war. The revolution in air transport regulation after the 1919 Versailles Treaty enhanced prospects for a more closely-bonded British empire, and the realisation that air travel could 'liberate the empire from the fetters of its geography' (James 1994 p438) caused the British to combine air sovereignty, which would protect their domestic industry, with a liberal formula that would facilitate the expansion of British air services overseas (Millichap 2000; Butler 2001). The new Secretary of State for Air, Sir Samuel Hoare, enthusiastically embraced aviation's imperial potential and formulated a futuristic vision of a British 'Empire of the Air', in which distance, that 'great enemy of imperial solidarity', was conquered (McCormack 1989 p378). "In the creation of air routes", Hoare said, "I saw…the chance of uniting the scattered countries of the Empire and the Commonwealth" (cited in Sampson 1984 p28).

Supportive politicians and aviators gave impassioned speeches as to the importance of developing a long-haul empire air service (Grahame-White 1919; Salt 1930), for it was believed 'the nation that controls the air will control the earth' (Lowell Thomas 1927 cited in Gordon 2004 p74).

In a bid to stress aviation's utility to the development, maintenance, and policing of empire, many daring aeronautical events were staged for public consumption. In 1919, Sir Ross Smith flew from London to Australia and declared that his epic 20-day fight had helped 'bind closer the outposts of empire through the trails of the skies' (James 1994 p438). Sir Alan Cobham undertook long-distance flights to Australia and South Africa (Cobham 1926a, 1926b), and in 1924, he flew a publicity flight to Africa because 'it was thought…that by flying to Africa in one day, a great impression would be created in the public mind which would draw attention to the aeroplane as a reliable and practical means of progression' (Cobham 1925 p297). However, the infrastructure, finance, and expertise did not yet exist to enable these feats to be replicated on a regular basis.

By 1922, the remaining British passenger airlines were in serious financial difficulties and a Civil Air Transport Subsidies Committee, or 'Hambling Committee', was appointed in 1923 to investigate the feasibility of nationalisation. In a report dated 15 th February 1923, the Committee suggested that in order to facilitate the formation of an imperial air network it would be necessary to purchase and amalgamate the four surviving independent British airlines; British Marine Air Navigation, Daimler Airways, Handley Page Transport, and Instone Airlines (Davies 1964). Accordingly, on 3 rd December 1923, the British Air Council signed an agreement with the promoters of a new airline, the 'Imperial Air Transport Company'. To finance the operation, 'Imperial Airways' was awarded a £1 million subsidy payable over 10 years and assumed the assets of the four existing companies, which comprised 13 old military aircraft and 1760 miles of cross-Channel routes (Champion 1956; Walters 1979). The new national airline, the 'chosen instrument' of British imperial air policy, began flying to a limited range of European destinations, including Paris and Cologne, in 1924 (Salt 1930).

WINGS AROUND THE WORLD

On January 7th 1927, Imperial Airways assumed responsibility for the 1,100 mile Cairo to Baghdad airmail route that had been operated by the Royal Air Force since 1921. The new commercial service was initially run at fortnightly intervals and took a little over three days to complete (Salt 1930). This route was subsequently expanded east, first to Karachi in April 1929 and then Jodhpur and Delhi, in what was British India, eight months later, and passengers were accepted in addition to the mail (Pirie 2004). Services to Calcutta, Rangoon, and Singapore were inaugurated in 1933, and flights to Hong Kong were started the following year. A subsidised 'Empire Air Mail Scheme' began operating between London and Australia in December 1934, and passengers were carried from early 1935 (Edmonds 1999). At the time, the 12,722 miles from London to Brisbane represented the longest air route in the world and took over 10 days to complete (Finch 1938). At this time, Imperial's only long-haul rival was the Dutch carrier KLM who competed with Imperial on certain Middle Eastern sectors that formed part of their Amsterdam-Batavia route (Davies 1964).

In addition to expanding east, Imperial Airways was also heading south. In 1918, the Baird Committee, reporting to Lloyd George, had advocated the inauguration of a Cairo to Cape Town air service (McCormack 1989). The route was surveyed in 1919, but financial and operational difficulties meant that scheduled services did not begin until the early 1930s. The first section of the route, from Cairo to Khartoum, was opened in 1931, and in January 1932, a regular service from London to Cape Town was inaugurated. This ran weekly, routing via Paris, Brindisi, Alexandria, Cairo and Khartoum, and linked up the 'red route' of British colonies in Africa on the way, fulfilling Cecil Rhodes' dream of a Cape to Cairo route, albeit by air as opposed to rail, and generating a rush for passengers and routes that was not unlike the 'scramble' for territory in the late 19th century (Brown 1932; McCormack 1976). By 1936, almost every 'sizeable' town in British Africa, including Kano and Accra in the west, had an air service (Pirie 2004).

By the middle of the decade, Imperial flew over fifty-nine thousand miles of interconnecting airways and linked over five hundred airfields around the world (Gordon 2004). Yet while performing a valuable political function in extending a "sphere of influence" over smaller nations (Crouch 2003 p11), the services were expensive and a test of endurance for aircrew and passengers alike (Brown 1932). In the mid-1930s, a journey from London to Cape Town took nearly four days and was

accomplished in 33 separate stages, involving six changes of aircraft and requiring intermediate stops at (among other places) Tripoli, Cairo, Khartoum, Nairobi, Bulawayo, and Johannesburg (Salt 1930). Nevertheless, this represented a substantial reduction in conventional journey times and passengers reportedly considered the journey itself to be an adventure (Frater 1986).

Despite the speed with which new services were inaugurated, the operational difficulties pilots encountered were considerable. As W F Willis, the official charged with finding suitable landing grounds in Southern Sudan in the early 1920s remarked, "Climatic and atmospheric conditions in equatorial Africa are most unfavourable for flying; sand-storms…travelling at a terrific speed, more dense than the thickest London fog and changing the whole face of the ground, occur frequently…electric storms are particularly violent…[and]…terrific "bumps" are encountered owing to the high hills, extreme heat, and sudden changes of temperature between night and day" (cited in Brown 1932 p364). Passengers were frequently roused at 5am or earlier so the aircraft could be airborne before the sun rose too high in the sky and created large thermal currents (Frater 1986). The local topography also presented unique challenges with respect to wayfinding and navigation. In the Middle East, convoys of motor vehicles were dispatched to dig trenches in the sand to aid navigation and demarcate landing grounds (Blake 1923), while a network of 12 Marconi wireless stations were erected down the spine of Africa to prevent aircrew from getting lost (Brown 1932). Despite these visual and technological aids, sparsely populated terrain was overflown with trepidation, as emergency teams could take several days to locate and reach a downed aircraft, by which time the occupants could have succumbed to exhaustion, thirst, heat stroke, or tropical disease, or been attacked by wild animals or hostile tribesmen (Frater 1986).

Practical difficulties aside, the development of this global aerial network was vitally important in maintaining contact with the colonies and promoting Britain's 'worldliness' and technological capability. As Lissitzyn (1942 p56) noted, 'the possession of well-developed air transport, especially…international traffic, is a factor enhancing the prestige of a nation at home, in its colonies and abroad. The very existence of such air transport seems to indicate that the nation is progressive, efficient and highly civilised, and that it is contributing its share to the progress of mankind'. However, some Middle Eastern and African peoples did not appreciate being overflown and 'taking pot-shots at passing airlines [became] the custom for rifle-toting tribesmen who had no desire to enjoy the 'benefits' of an alien civilisation' (Walters 1979 p19).

Such danger apparently only served to reinforce the notion that flying was a modern and exciting way to travel and, by 1934, aviation was sufficiently popular for Bradshaw's of London to publish the first in a series of monthly International Air Guides that provided timetables of all the world's scheduled air services. By this time, the 8458-mile journey from London to Singapore cost £180 and was achieved in eight days courtesy of intermediate stops at Paris, Brindisi, Athens, Alexandra, Cairo, Gaza, Baghdad, Basra, Kuwait, Bahrein [sic], Sharjah, Gwadar, Karachi, Jodhpur, Delhi, Cawnpore, Allahabad, Calcutta, Akgats, Rangoon, Bangkok, and Alor Star (Sampson 1984). All food, accommodation, and hotel transfers (where applicable) were included in the price, and advertisements stressed the civility of flight (London 2007). According to Pirie (2004), some 46,330 people used Imperial Airways' empire air services between 1930 and 1939, and records suggest that the majority of passengers were high-ranking military or colonial officials or wealthy members of the British aristocracy who did much to disseminate British culture and British political ideology around the world (Frater 1986).

Imperial's policy of focusing on long-haul air services meant that they neglected their European network. While Sir Samuel Hoare remained convinced 'that the future of British civil aviation lay in the long-distance Empire routes, and not in the short joy-rides between the capitals of Europe' (cited in Frater 1986 p214), the vice-President of the newly formed pilot's union BALPA complained that 'Imperial Airways' service in Europe…is the laughing stock of the world' (cited in Sampson 1984 p30). Routes to Berlin and Amsterdam had been abandoned in the mid-1920s, and by the mid-1930s, Imperial operated only two intra-European services: London-Paris (with a summer-only extension to Zurich) and London-Brussels-Cologne (Davies 1964). Continental carriers meanwhile were proving to be astute competitors, and though not able to match Imperial's extensive international services, focused their attention on developing a dense network of intra-European services (ibid. 1964).

In 1935, the Government-appointed Cadman Committee produced a scathing report of Imperial Airways operations, criticising its poor staff relations, its obsolete equipment, and its failure to develop European services (Sampson 1984). As the aviation historian R.E.G. Davies remarked, 'in the eyes of Imperial Airways the continent of Europe seemed to amount to about five miles around the Eiffel Tower and a few lake resorts in Switzerland' (1964 p59). The Cadman Committee thus recommended that overseas routes should be split in two, with Imperial operating long-haul empire air routes and the responsibility for developing intra-European services be delegated to a new carrier, the original British Airways. This division, however, was never satisfactory. In 1936, with British Airways flying to Scandinavia, Berlin, Warsaw, Budapest, Brussels, and Paris, Imperial Airways was still serving Frankfurt, Zurich and Paris.

CITIES OF THE AIR - THE PATTERN OF WORLD AIR CITIES IN THE 1930S

While Imperial only served a limited range of European destinations, their global network was among the most extensive in the world. Crucial to its success was the provision of refuelling and maintenance facilities en route. Owing to the relatively slow speeds and limited range of Imperial's passenger aircraft, emergency landing grounds and passenger rest houses had to be constructed at regular intervals. Some of these landing grounds were upgraded military airbases, while others were entirely new constructions. The airstrip and rest house in the desert oasis of Rutbah Wells in the Syrian Desert was specially built for Imperial Airways by the Iraqi Government and defended against hostile tribes by armed infantry. One passenger wrote of the 'unforgettable experience of arriving at the most desolate and extraordinary hostelry in the world', while another remarked on 'the absurdity of coming down [in the morning] to an English ham and egg breakfast in the middle of the desert' (cited in Frater 1986 p85). While Rutbah Wells and others like it were rest stops, where passengers were not expected to embark or disembark, archival evidence shows some intermediate airports did generate (albeit modest) levels of local traffic. Of the six passengers on a flight from Salisbury to Johannesburg in January 1937, one had boarded at Alexandria, one at Cairo, one at Khartoum, one at Nairobi, and two at Salisbury (Pirie 2004 p74). Likewise, on the Kisumu-Durban route in the mid-1930s, 'almost a third of paying passengers who boarded at Mozambican stops flew…internally to other Mozambican stops' (ibid. 2004 p76).

Given the linear nature of the air routes that radiated out from London, the necessity of regular stops, and the extent of British global geopolitical influence, global air centrality in the 1930s was held by Egypt and Palestine. Owing to its geographical location, Cairo became one of the busiest airports in the world, and all Imperial Airways aircraft, whether destined for Europe, Africa, or Asia, converged on the Egyptian capital. Back then, the pattern of world cities (as measured by air passenger numbers) was radically different to today, with Cairo, Khartoum, Gaza, Baghdad, Basra, Gwadar, Karachi, and Rangoon emerging as key nodes in a developing global air network. As well as operating long-haul empire air services, the British were also responsible for helping establish local airlines that ferried passengers and cargo to and from the main trunk services (Davies 1964). As longer-range aircraft were introduced, the relative importance of these airports diminished and new destinations gained prominence, but their early association with civil aviation had a lasting legacy. In the 1980s, all but two of the 35 airfields used by Imperial Airways on their London to Australia services (Gaza and Rutbah Wells) were still in use by scheduled passenger services (Frater 1986).

In November 1938 the British Government put forward proposals to merge Imperial Airways and British Airways into one state-owned corporation. On August 4 th 1939, Royal Assent was given to a Bill that sought to create a new carrier, British Overseas Airways Corporation (BOAC). The Act came into force on 24 th November 1939, and BOAC officially assumed the assets of Imperial and British Airways on 1 st April 1940, for £2.66m and £260,000 respectively (Davies 1964).

CONCLUSION

The mid-1920s and 1930s are often nostalgically referred to as the 'Golden Age' of British civil aviation. In its sixteen years of operation, Britain 's Imperial Airways developed and promoted long-haul aviation as a viable means of long-distance travel and formulated and maintained a global aerial network that ushered in a new era of post-war globalisation and mass aeromobility. Though criticised

as being the product of an imperial power in decline (Ewer 2007), Imperial Airways established both the material and cultural foundations on which post-war civilian aviation would flourish and thus its importance must not be underestimated.

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