

SIR FREDERICK HANDLEY PAGE LECTURE

10 SEPTEMBER 2009

Good afternoon Ladies and Gentlemen

As you have heard my name is Gordon Page and, just to remove any misunderstanding, I am not related to Sir Frederick Handley Page or to his flying ace nephew Geoffrey Page.

My father was Sir Frederick Page of Canberra, Lightning, Jaguar, Tornado and British Aircraft Corporation fame. I know that he shared many of the passions, vision and frustrations of our subject today.

As a past-President of the Society, the SBAC and as an officer of Cranfield University I think I can claim an affinity with my remarkable namesake. I think he would be rather proud of the way in which all three institutions have developed.

From the start of his industrial career Handley Page was interested in a structured approach to industry. Training and Further Education, Research, Engineering, and Manufacturing were all essential sciences. They could and should be organised within an integrated framework. What we take for granted today was pretty radical when the aerospace industry was in its infancy and dominated by a number of adventurous and heroic pioneers.

Handley Page's life and achievements covered the transition from "trial and error experimentation" to the formation of an aerospace industry. He progressively addressed the problem not of "will it fly?" but "how can we design and manufacture more efficient and purposeful aircraft based on scientific knowledge – and how best can we continue to develop the required knowledge." The major part of his industrial career fell in a period of national economic austerity which only enhances the value of his achievements.

Yes he was a visionary but you will hear from some of my later remarks that he was still a man of his time. There is a fascinating mixture of radical vision and, to us, old fashioned views. It is an uncommon mix which, combined with his driving energy, enabled him to play such a major part in the creation of today's aerospace industry.

He had a lifelong interest in attracting the best available talent into the industry both by direct recruitment and by training and upskilling those who did not always have the best education. He was enlightened in this respect and "inclusion" if I might call it that was to be a theme of his career. I will quote a number of his remarks later on.

Between 1906 to 1910 he is recorded as teaching and using the laboratory facilities at the Northampton Institute in Clerkenwell (now City University) as you have heard earlier. This, when he was in the process of forming his own company, Handley Page Ltd. It is a feature of his life that he was able to multitask.

Handley Page was active in early discussions with Industry and Government on the need for a huge boost in technical research , training and education, particularly for the aeronautics sector. In the UK not much was done in the inter – war years to address future technology planning and development. The need for this was highlighted by a UK mission to the United States in 1942 which found that “the design and engineering forces employed at the chief aircraft and engine plants was of the order of five times greater than that which is employed in this country.” The mission also found a large number of senior service personnel and Government officials who were technically qualified and usually University graduates.

So concerned was the Industry that , in conjunction with the Royal Aeronautical Society it held two Open Days in June and July 1943. These were chaired by Dr Roxbee Cox later Lord Kings Norton. Handley Page spoke at the first of these and was concerned to widen the debate from just the training of research workers which, to quote “ rather narrowed down their ideas of education to theoretical work not immediately connected with engineering.” He advocated that engineering production (including materials and processes) and administration should be part of an integrated educational process. He fully supported the emerging view that the UK should have a central post-graduate school for aeronautical engineering. The 1942 mission had noted that the US had several specialised institutions including military research laboratories and academic institutions such as M.I.T

A few quotes from his input to the meeting:

* There were two different kinds of people in this country who needed education for industry. First there was the kind of person who, by reason of his circumstances, could not continue his ordinary school education up to the age at which it was usual to enter a University – at an early age he would enter the hard school of life in the works, where he would learn engineering to survive. That was really the best way to learn all the details....

The second kind of individual, more fortunate, remained at school until he entered a University; he received a really good education from the point of view of book learning with perhaps a minimum of practical work. It was most difficult to ensure that a person who had been educated at a College or University would follow that up by a really good education in the works. Presumably the whole question could be studied when a research organisation and central college had been established , at which they could teach students everything they ought to learn. They might give technical training to potential Prime Ministers, air marshals or even company directors.”

*On the production side of aircraft they should encourage those who were engineers and who desired to go more deeply into the methods by which articles were made, and should give them greater opportunity to take a post-graduate course. In doing so recognition

must be given to the cost of the heavy and expensive machinery that would be needed when reviewing the facilities required.

*With regard to the administrative side of engineering any long programme needed planning, the planning needed progressing and the whole thing must go forward in an orderly and well-balanced sequence. Engineers very often looked down on such matters, which were perceived as “commercial” and on a rather lower scale. The people involved very often came into the industry by “the tradesmen’s entrance”. Modern industry, and not just aerospace, recognises these problems but that is not to say they are behind us. One of the most sought-after talents in industry today is programme management.

This was an issue which impressed Handley Page in connection with American research – the substantive scale of administrative ability that was available and which governed the general outlook of research organisations. More was needed in the UK and proper training in all these aspects in structured programmes must be encouraged. He was a very practical man.

He would have been proud to see Cranfield’s Aerospace, Engineering, Manufacturing, Applied Sciences, and Management Schools on a single campus, alongside its own operating airfield, and to see the University’s extensive and very practical programmes conducted in partnership with a range of world-leading technology companies. I think he would also have welcomed the mix of international abilities and cultures on campus.

These 1943 meetings culminated in the Aeronautical Society taking the initiative and framing a series of resolutions which were accepted by Government as the basis for further study. In a relatively ordered process, a Government committee was formed, and its report was accepted by Cabinet. This led to the establishment of the College of Aeronautics at Cranfield in 1945 and Handley Page was appointed to the original board which met for the first time in December 1945. The board was faced with an enormous challenge of providing a central post-graduate technology facility from , if not a green field, then a decommissioned war-time RAF airfield. In some respects a green field might have been preferable.

The Cranfield site, originally 100 acres of farmland in Bedfordshire, had been acquired by the Air Ministry in 1935 and RAF Cranfield was established in 1937. It was home to flights of the Hawker Hind and the Blenheim- but that is another story.

The first students, all 41 of them, arrived in October 1946 and most joined the aerodynamics and aircraft design courses. To be able to accept them only 10 months after the first meeting of Governors was a considerable achievement. Imagine playing a major role in this whilst fighting to sustain your own independent aircraft company as well as representing the industry through involvement in its Societies and serving on the odd Government committee !

Handley Page remained directly involved with Cranfield from 1945 until his death in 1962. He was the second Chairman of Governors and his tenure in that position lasted from 1953 until 1962. He was succeeded by the now Sir Harold Roxbee Cox referred to

earlier, later ennobled as Lord Kings Norton. Cranfield has indeed been fortunate in its Chairmen.

Handley Page oversaw real progress at Cranfield. Its constitution was updated, the Work Study school was formed with industrial sponsors – later to develop into the School of Management . In 1957 the College assumed management responsibility for the Cranfield site and acquired the freehold from Government in 1963. He oversaw the creation of new departments in Aircraft Electrical Engineering and in Mathematics in 1955 and in Aircraft Materials in 1958. An amended Deed of Trust was agreed in 1960 which allowed the College to engage in a wider range of activities. New courses were introduced covering fluid mechanics, control engineering and automotive engineering. A programme of diversification exactly in line with his long-held beliefs.

He successfully led Cranfield out of the post-war crisis and laid the foundations for a more diversified technical institution. He and his team secured ownership of the campus thus ensuring a considerable degree of long term financial stability. And today, Cranfield University is an internationally competitive, practical, technology centre of excellence. He would have loved it.

His personal commitment to the development of Cranfield over many years was in addition to managing his own company which produced a range of increasingly sophisticated aircraft – a real struggle for a relatively small independent company competing with much larger and stronger corporate entities. I have a particular empathy with the Victor nuclear bomber which, when fitted with air-to-air refuelling equipment from my last company, Cobham, performed so well over so many years. Handley Page Ltd, under his leadership, established a formal Apprenticeship scheme which was recognised as one of the best in Industry. The company regularly sponsored its most promising employees on courses at Cranfield.

The name of Handley Page is remembered today at Cranfield with an annual lecture, a named road within the University campus and a number of named meeting and function rooms. His portrait looks down (kindly I hope) on our current deliberations. And there is one other very tangible connection – The University operates a Handley Page Jetstream 31 (G-NFLA) as the National Flying Laboratory Centre. It earlier operated an older Jetstream Mk 1 aircraft. Cranfield Aerospace also looks after a second Jetstream aircraft for another owner. I have flown in our aircraft and, not only is it a very nice aircraft to fly, but the tuition facilities from cockpit to individual seat are excellent. The Jetstream continues to be used on a number of advanced projects including simulated UAV operations. I think Sir Frederick would have thoroughly approved.

And that's about it. Thank you all for listening. I am privileged to have been included in this part of the celebration of the Centenary of the First British Aircraft Company. I will finish with one last quote from the great man himself ;

“NOTHING IS SO INSPIRING AS SEEING BIG WORKS WELL LAID OUT AND PLANNED, AND A REAL ENGINEERING ORGANISATION.”

THANK YOU
