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## **Selling the Early Air Age**

### **Aviation advertisements and the promotion of civil flying in Britain, 1911-1914**

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Abstract extracted to another file

If one subscribes to conventional historiographies of air transport, the modern aerial age began at 10.35am on 17 December 1903 on the windswept sand dunes of Kill Devil Hills, near Kitty Hawk, North Carolina, when Orville Wright coaxed his Wright Flyer into the air and remained airborne for 12 seconds, covering a distance of 120 feet, before landing.<sup>1</sup> While short in both duration and distance, the flight marked the first time in the history of human endeavour that a pilot had been able to take off, fly through the air, and land at a point equal in elevation to that of the place at which he had departed. Although the flight represented a significant milestone in the history of human endeavour, the event attracted surprisingly little publicity at the time and leading political and scientific establishments largely dismissed the existence and future potential of powered flight. Nevertheless, news of the Wright's flights reached quickly Europe and wealthy members of European society began building – and crashing – numerous aircraft in an attempt to emulate their success.

In Great Britain the first successful powered flights were performed in 1908 and dedicated flying grounds were soon established around the country by enthusiastic advocates of the new technology. A number of international air meets, aero exhibitions, air shows, and cross-country air races were also convened hastily in an effort to showcase the new aeronautical technology and capture the public's imagination for flight. All of these events portrayed aviation as a thoroughly modern, progressive and exciting technological development and inspired a small number of inventors and would-be aviators to attempt to build and fly their own machines.<sup>2</sup> However, amateur aircraft construction was an expensive and a hazardous occupation and only a few designs proved

airworthy. Sensing an opportunity to recoup some of the (extensive) development costs that were associated with the machines that could fly, a number of inventors began taking out patent protection and advertising their inventions for sale on the open market. Surviving examples of these early advertisements allow transport researchers to make 'plausible inferences'<sup>3</sup> about past social realities. Despite advertisements being a valuable source of empirical information their academic potential is often underexploited. In an attempt to uncover the changing nature of the aeronautical goods and services that were being sold during the early years of the twentieth century, a content analysis of aviation advertisements should be revealing. Not least, it may show how the production of these advertisements contributed towards shaping public discourses about flight in the early years of the twentieth century.

The use of advertisements as a means by which to examine past mobility practices has become increasingly popular in recent years. The aviation historian Peter Lyth opined that advertisements represent 'a window on to the landscape of our social culture' that enables researchers to examine how individual businesses or industrial sectors presented themselves to the public and evolved over time.<sup>4</sup> In the context of transport history, this approach has resulted in the publication of studies that have variously examined the advertising strategies that were employed by British inter-war railway companies and American bus lines.<sup>5</sup> Yet despite a diverse body of popular and/or enthusiast literature that examines the marketing strategies and/or design histories of selected international airlines,<sup>6</sup> sustained academic consideration of aviation advertisements remains rare.

In order to improve understanding of how Britain's fledgling aviation industry developed and promoted itself before the First World War, a content analysis was done of all advertisements that appeared in one British weekly aeronautical newspaper, the *Aeroplane*, between 8 June 1911 and 25 June 1914.<sup>7</sup> The use of a single, specialist source will inevitably raise concerns about the veracity and reliability of the data. However, recourse to a carefully selected and sequentially published series of information yields a suite of advertisements that were compiled and published under the jurisdiction

of a single editorial team and is untrammelled by the inclusion of examples from other sources. Although my paper can not, and does not, make any attempt to address whether the advertisements were effective in generating commercial sales, it argues that their very presence helped to shape public perceptions of, and attitudes towards, human flight a century ago. The paper begins by reviewing the development of aviation in Britain before 1914 and discussing the importance of the printed media in disseminating news of aeronautical achievement. There follows a detailed description of the investigative method used, presentation of findings, and discussion of their implications for air transport history.

### **British aviation before the Great War**

In the eleven year period between the Wright brothers' first flights in December 1903 and the outbreak of World War One in 1914, aviation developed rapidly from an object of curiosity and intrigue into a viable (if still relatively unsafe and unreliable) mode of transportation. Unlike the United States and France, which had both witnessed relatively substantial levels of aeronautical experimentation in the early years of the twentieth century, Great Britain initially appeared reluctant to join the aerial age. It was reportedly a source of considerable embarrassment that the first flight to take off from British soil, in October 1908, was piloted by an American.<sup>8</sup> In July the following year, French aviator Louis Bleriot's successful flight across the English Channel forced further unfavourable comparisons to be drawn between the status of Britain's aviation industry and those of her continental European and American neighbours.<sup>9</sup>

Frustrated at what they perceived to be the British Government's continued ambivalence towards aviation, a number of British aviators, protagonists and publicists took it upon themselves to engender a sense of enthusiasm and passion for flight and make the British public more 'airminded'.<sup>10</sup> The proprietor of Britain's *Daily Mail* newspaper, Lord Northcliffe, believed it was his duty to 'convince our readers that a new age has dawned, to rouse them to action... and to kindle a living interest in flight among all our citizens'.<sup>11</sup> To that end, his newspaper appointed a dedicated

aeronautical journalist to report aeronautical endeavour and progress. His paper also regularly sponsored flying meetings to promote aviation's continued development and emphasise its strategic importance to British defence and economic development.<sup>12</sup>

By 1910, regular 'exploits, meetings, races, competitions and demonstrations' were being staged in Great Britain to 'meet the new public demand to see aeroplanes, and even to fly in them'.<sup>13</sup> Such was the enthusiasm for flight that crowds, tens of thousands strong, would regularly attend air meetings to witness the new aeronautical technology on display and marvel at the skill of pilots who attempted daring (and often ill-conceived) feats of aerobatics.<sup>14</sup> However, despite the sense of excitement, achievement and optimism such events invariably generated, human flight continued to present all manner of challenges. Issues concerning power, stability, control, physical comfort, the inclement British weather, and the identification of suitably strong-yet-lightweight construction materials all consumed considerable time, lives and capital. Far from being seen as a worthwhile endeavour, flying continued to be viewed by many as 'a dangerous act ... which reflected the restlessness of the age and [which] was only suitable for wild and reckless spirits'.<sup>15</sup>

As a consequence, many aerial experimenters laboured in relative obscurity, and it was only a very small minority of more 'entrepreneurially-minded' inventors that sought to capture the public's evident enthusiasm for flight and transform it into profit.<sup>16</sup> Alert to potential commercial applications of their activities, pilots and 'technological entrepreneurs' who had 'come of age in a new technical-cum-mechanical engineering environment'<sup>17</sup> began accepting paying passengers and exploiting all possible opportunities to advertise and sell their products. In order to generate sales, these 'aeropreneurs' had to make potential customers aware of their products and persuade potential consumers to purchase them. One of the easiest (and perhaps most effective) ways to do this was through advertising. However, despite the optimism of a few committed individuals, the commercial reality was that the domestic British market for aeronautical products before World War One was modest. By January 1911 Britain only boasted 57 qualified pilots (compared with 353 in France) and a limited number of aerodromes.<sup>18</sup> Nevertheless, the survival of advertisements for

aeronautical products from the early years of human flight offer new insights into the range of goods and services that were offered, into how these commodities developed over time, into the type of businesses that were trading and their geographical location, and into past practices of aeronautical consumption.

### **The advertisements: content classification**

The use of historical advertisements as a source of empirical data inevitably presents challenges of selection and interpretation. Accessing suitable examples can be problematic, and the choice of original material is often dictated as much by the availability of surviving examples as by the desirability of their inclusion in any subsequent research.<sup>19</sup> The empirical data on which the present research is based was obtained from the Transport History Collection at the University of Leicester in the United Kingdom. Among other records, this collection contains original and complete copies of every issue of the British weekly aeronautical newspaper, the *Aeroplane*, from publication of the first issue (8 June 1911) to the 160<sup>th</sup> (25 June 1914).

Under the editorship of Charles Grey (1875-1953), engineer and champion of British aeronautics, the *Aeroplane* sought to disseminate news of British and overseas aeronautical achievement and provide a forum in which the latest innovations in aircraft design and development could be debated. According to Grey, the paper fulfilled a need for a ‘thoroughly independent weekly paper dealing with aviation in all its phases’ which appealed to ‘all sorts of people who are interested in aviation’, not just professional aviators or Royal Aero Club members.<sup>20</sup> Although the *Aeroplane* was not the first British weekly newspaper dedicated to the emerging activity of aeronautics (*Flight*, the official organ of the Royal Aero Club of the United Kingdom, and *Aero* had both been launched in 1909), the title was unusual in that it was produced independently and contained advertisements from its inception.<sup>21</sup> As the title was not a member’s magazine, the editorial team had the freedom to publish an eclectic mix of (often quite provocative) articles and accept advertisements from any paying source.

Informed by his previous editorial experience working on a cycling magazine, Grey enthusiastically embraced the concept of advertising in his new newspaper and used the revenue it generated to supplement the *Aeroplane's* nominal 1d (one old pence) cover price.<sup>22</sup> Initially, these advertisements were interspersed throughout the publication. From 18 January 1912 onwards a dedicated classified section was also introduced at the rear of the newspaper into which short (text-only) advertisements, containing up to eighteen words, could be placed for the pre-paid price of 1s 6d (one shilling and sixpence). Owing to limitations imposed by the printing process, all the advertisements were printed in black and white or in greyscale, although both text and illustrations could be reproduced. The latter usually took the form of line drawings, technical diagrams, or photographs which illustrated the appearance and/or demonstrated the technical advantages of a specific aircraft or engine component. While the advertisements could not, of course, offer any information about how many units were purchased as a result of their presence, their existence and content reveals much about the changing nature of the goods and services that were being sold, the explanations and suggestions that were offered for their use, and the marketing strategies that were employed in attempt to sell them.

In order to document the frequency with which advertisements appeared, the nature of the product(s) that were being sold, the name and location of the company that was being advertised, and any recurrent advertising themes, a content analysis was done of every advertisement (including those in the classified section) that appeared between the first issue of the *Aeroplane* and the 160<sup>th</sup> last one before war broke out. Content analysis allows for 'the objective, systematic, and quantitative description of the manifest content of communication'<sup>23</sup> and it enables the explicit (or surface) content of different forms of communication (including advertisements) to be evaluated and recorded. A coding frame was developed after a scoping study of the content of 100 advertisements that appeared in four randomly selected issues (one from each year): it contains thirty discrete categories across eight thematic areas (Table 1).

**Table 1** Advertisement coding frame

<b>Aircraft</b>	<b>Education</b>	<b>Employment</b>	<b>Engineering</b>
Aircraft for sale	Tuition/flying schools	Situation vacant	Precision engineering
Airships for sale	Training courses	Situation wanted	Aircraft repairs
Engines + components	Aviation books		
Propellers	Aero clubs		
Aircraft parts/accessories	Air maps		
Oil/lubricants			
<b>Entertainment</b>	<b>Facilities</b>	<b>Finance</b>	<b>Miscellaneous</b>
Aviation meetings	Hangars	Aviation insurance	Aero clothing
Exhibition flights	Premises to let/sell	Patents	Media/publicity
Aircraft models	Aerodrome	Aircraft charter	Catering (airfield)
		Capital/partner required	Equipment wanted (various)
			Other (non - aeronautical)

The category descriptors were designed to be as self-explanatory as possible. Thus, within the 'aircraft' theme, the category 'engines + components' included advertisements for engine manufacturers, specific engine types, and related engine apparatus such as ignition plugs and pistons. The category 'Aircraft parts/accessories' was applied to advertisements that promoted all fixtures and fittings (other than engines) which could be used to construct, or be installed on or in, an aircraft, and included fabrics, timbers, metal castings, tyres and safety belts. Under the 'education' theme, advertisements for 'tuition/flying schools' (i.e. companies who offered flight training) were distinguished from other 'training courses' which usually took the form of night-school instruction or correspondence programmes on subjects allied to aero-engineering and aerodynamics.

The 'engineering' theme differentiated 'precision engineering' (which included advertisements for businesses that offered such services or supplied specialist machinery and tools) from 'aircraft repairs', which were explicitly concerned with post-incident/crash recovery work. The category 'patents' (within the finance theme) described advertisements that were placed by legal services firms who were offering advice on intellectual copyright protection for new inventions. The 'miscellaneous' theme contained five categories that did not fall into one of the seven other



thematic areas and included advertisements for aeronautical clothing, media/publicity services for aviation meets, airfield catering, equipment wanted, and non-aeronautical goods and services, which, while not numerous, included advertisements for motor cars, motorcycles, bespoke furniture, and gramophones.

### **Aero advertising: trends and patterns**

Over the course of 160 issues, 6,857 individual advertisements were identified and coded. This equates to an average of just under 43 advertisements per issue across the four years, although the average number per issue/year increased markedly between 1911 and 1914 (Table 2).<sup>24</sup>

**Table 2** Number of advertisements per year/issue, 1911-1914.

Year	Number of issues examined	Total number of advertisements placed during the year	Average number of advertisements per issue
1911	30	303	10
1912	52	2,328	45
1913	52	2,756	53
1914	26	1,470	57

Of the eight core advertising themes, advertisements in the aircraft, education and entertainment-related themes were the most numerous, accounting for 49 per cent, 23 per cent and 9 per cent respectively of all the advertisements that were published (Table 3). Between 1911 and 1912 there was a notable reduction in the proportion of aircraft-related advertisements that were placed; a general diversification in the nature of the advertisements that were placed during the four-year period under investigation is evident (Table 3).

**Table 3** Proportion of advertisements by year and by core advertising theme (%).

Year	Aircraft	Education	Employment	Engineering	Entertainment	Facilities	Finance	Misc
1911	81	11	-	6	1	1	-	-
1912	45	28	3	3	8	1	8	5
1913	49	23	4	1	11	1	6	5
1914	50	20	7	2	8	3	7	3

Average	49	23	5	2	9	1	7	4
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In 1911 only five of the possible eight core advertising themes and only 12 of the 30 possible individual categories of advertisements were recorded. All these advertisements were marketing goods and services that were essential for flight, including aircraft, aero engines, aircraft parts/accessories, propellers, and flying tuition. By 1912, and following the introduction of a cheaper classified advertising section, all eight core themes and examples of 29 out of the 30 individual categories of advertisement were present. As 1912 progressed, a growing number of these advertisements started to promote the consumption of goods and services which were not pre-requisites for flight, including legal/financial services, aeronautical books, and model aircraft. These advertisements were arguably targeting not the needs of wealthy ‘professional’ aviators but those of the less affluent members of the public who were interested in flight.

The individual categories (as opposed to core themes) with the greatest number of advertisements were those for flying schools offering tuition, aircraft for sale, and sales of aircraft parts/accessories (Figure 1). The 1,431 advertisements for flying tuition alone accounted for 21 per cent of all the advertisements that were published, while the top ten categories collectively accounted for 90 per cent. In order to examine this data in more detail, the following subsections examine the three thematic areas that collectively contained the highest number of advertisements.

**Figure 1** The top ten individual advertising categories.

Attached in a separate file – boxes now black, misspelling corrected

#### *Aircraft-related advertisements*

Collectively, the five individual categories within the ‘aircraft-related’ theme were the most numerous. Of these, ‘aircraft for sale’ appeared the most frequently, with 1,249 examples and at least one advertisement in this category appearing in 159 of the 160 issues that were examined (Figure 2). In addition to a general increase in the number of aircraft-related advertisements over

time, a number of distinct peaks were evident in the data. Examination of the articles contained within the issues that corresponded to these peaks, including that of the highest peak of 12 March 1914, revealed that they either anticipated (by a week) or exactly matched the dates of international air shows or exhibitions. Many of these additional advertisements were taken out by companies which were displaying at the shows and which highlighted this fact in their advertisements, perhaps in an effort to afford their business greater respectability and public exposure.

**Figure 2** Frequency of 'Aircraft for sale' advertisements, June 1911-1914.

Fig 2: Now in black and attached as a separate file. Number of vertical date markers reduced and date format changed. All months abbreviated to three characters and axis broken into year blocks with just three months – Jun, Oct, Feb – named (I decided on June as first month as this was the month in which both the first issue of the newspaper and the last one I consulted were published).

Unsurprisingly, advertisements that were seeking to sell aircraft extolled the virtues of the particular airframe under consideration and often invoked notions of the superior speed, stability, strength, durability and, on occasion, the 'Britishness' of the machine. Over 60 per cent of advertisements within this category provided details of the endurance flights, speed trials, or air races that had been won using the equipment (see Figure 3) and just under one quarter contained written testimonials from leading aviators which confirmed the manufacturers' claims. These 'testimonial' advertisements reveal which pilots the advertisers believed consumers would identify with and accept as being authorities on the subject of flight.<sup>25</sup>

**Figure 3** A 1911 advertisement for Howard monoplanes and biplanes. Note the reference to speed and their success in the 'De Forest' prize, as well as the absence of a price guide.

Source: *Aeroplane*, 5 October 1911, p. 413

Image attached as a separate file.

While any physical difference in aerodynamic performance was arguably imperceptible to the average amateur pilot, the marketing hyperbole created a sense of aeronautical 'one-upmanship' in which aviators were encouraged to rid themselves of old and obsolete machines and invest in ever-more modern and sophisticated aircraft. Bristol spoke of the 'perfect design, flawless construction, speed, stability, and absolute reliability' of its aircraft.<sup>26</sup> Sopwith claimed that its aircraft were so reliable that they would 'fly at the first time of asking'.<sup>27</sup> Such findings align with much of the theoretical work that has been conducted into automobile advertising of the early-mid twentieth century.<sup>28</sup> This body of work posits that an advertisement's primary function is to create difference between competing products within the same consumer category and, in so doing, generate a favourable image or impression of that product among the minds of consumers in order to stimulate their desire to consume it.

The majority of the 'aircraft for sale' advertisements that were published between 1911 and 1914 were placed by a relatively small number of manufacturing companies. These young and ambitious firms, which included A.V. Roe and British and Colonial, pushed the boundaries of aeronautical innovation and also revolutionised practices of aircraft production by centralising research, development and construction at a few key sites and by looking overseas for inspiration (particularly to France where Charles Voisin, Henry Farman, Leon Delegrange and Alberto Santos-Dumont were flying and designing aircraft). The spatial and organisational implications that this change from small-scale construction to centralised workshop assembly informed by practices overseas effected were far reaching and ultimately enabled more sophisticated aircraft to be produced more quickly and more cheaply than ever before.

However, despite such changes, the purchase price of new aircraft remained well beyond the financial means of the majority of the British population. An 'entry level' Deperdussin monoplane, manufactured by The British Deperdussin Aeroplane Syndicate Ltd, for example, cost

from £400 (depending on specification). As a consequence, a number of firms suggested that the cheapest way for a would-be pilot to become airborne was to personally construct a flying machine using equipment purchased from a specialist supplier. Thus, in addition to being able to purchase 'ready-to-fly' airframes straight from the pages of their newspaper, from early 1912 readers of the *Aeroplane* were also presented with a range of advertisements from individuals selling second-hand airframes and from companies offering to supply the plans, timber, tubing, tyres, metalwork and adhesives that would be required to construct an aircraft from scratch.

Underpinning these 'do it yourself' advertisements was a sense of anticipation and excitement and a firm (if perhaps misplaced) belief in the techno-scientific ability of readers, with advertisers provocatively asking 'Do *you* want to build a flying machine?', 'Are *you* requiring propellers?' (emphasis in originals). Leaving aside thorny questions of whether readers of the *Aeroplane* were technically or financially able to engage in such practices, the content of the advertisements demonstrated that the components necessary to construct an aircraft were largely interchangeable. Thus, if the expense associated with a 'ready-to-fly' aircraft was prohibitive, a cheaper engine and less expensive components could be sourced from a third-party retailer and installed on a basic airframe. While this early 'unincorporated' style of manufacture and production was not unique to aviation, the fact that more than thirty companies were advertising their ability to supply aircraft components between 1911 and 1914 indicates the level of consumer demand for such products.

One of the most competitive sectors was the market for aero engines and numerous column inches were devoted within the pages of the *Aeroplane* to debates concerning the most effective way of powering different aircraft. Although experiments with steam-powered aero engines and 'pushers' (which pushed the air out behind an aircraft in much the same way as a ship's propeller moves a vessel through water) proved disappointing, tractor-engines (which were initially mounted in the nose and which pulled aircraft through the air) showed considerable promise and specialist companies including Gnome, Green, and the Austro-Daimler company sought to develop and supply

increasingly reliable and powerful aero engines. The first engine that was specifically designed for aircraft was the Gnome Omega. Designed in France, its seven radial cylinders delivered 50 horsepower but its 168lb weight meant that its power-to-weight ratio was poor and rendered many early airframes chronically underpowered. As a result, Gnome and other engine manufacturers strove to develop more powerful yet lightweight products. By August 1911, Greens' Aero Engine Company was promising that its engines combined 'reliability, power, and economy with light weight' and would provide superior performance.<sup>29</sup>

In addition to being presented with an expanding range of airframe and engine suppliers, readers of the *Aeroplane* were also encouraged to believe that the type of propeller they installed on their engine would have a material impact on aircraft performance. A.V.Roe promised customers that 'Your aeroplane will give better results when fitted with an 'Avro' propeller'.<sup>30</sup> Integral, a specialist propeller supplier, maintained that their products 'still hold all records' for speed, endurance, and safety.<sup>31</sup> Yet, for all the hyperbole that surrounded the choice of airframe, engines and propellers, fuel and lubricants remained far more important to the efficiency, power and reliability of aircraft.

Early aircraft engines were particularly vulnerable to the presence of fuel impurities and contamination while pistons and other moving parts would quickly seize if not adequately lubricated. Seeing an opportunity to develop new products, oil companies (including Castrol and Shell) diversified away from their core automotive business and began producing specially refined fuels and lubricants for use in aircraft. Given the obvious danger posed by in-flight engine failure, these new chemical compounds were promoted as being the safest, most reliable and most trusted products that were available (Figure 4).

**Figure 4** Owing to the fact that it reportedly did 'not gum nor carbonize', specialist aero oil, 'Staero', was promoted as being a superior lubricant which delivered improved engine performance and reliability.

Source *Aeroplane*, 13 June 1912, p. 573

Image attached a separate file

Alongside airframes, engines, propellers and fuels, the growing aviation industry also created new demand for other material and human resources, including ferrous and non-ferrous metals, timber, (hydro)carbon compounds, chemical products (including varnishes, paints, resins, dopes,<sup>32</sup> and adhesives), textiles (such as leather, linen, rubber and silk), and skilled and experienced personnel who were able to construct, maintain and service aircraft. As with other aeronautical commodities, there was considerable competition for custom, with companies emphasising the superior attributes of their products and/or highlighting the endorsements they had received from leading aircraft manufacturers and pilots.<sup>33</sup> Thus, trading alongside the specialist engine and propeller suppliers were more general equipment providers, including the Continental Tyre and Rubber Company, General Aviation Contractors, and the Universal Aviation Company of Piccadilly, London, which could reportedly procure all manner of accessories, from rubber tyres and tubing to altimeters and safety equipment.<sup>34</sup> This latter group included advertisements for 'Tabloid brand first aid' and pleas to pilots to 'include the means of repairing yourself' if injured while flying.<sup>35</sup> Initially, safety equipment involved little more than carrying a box of bandages but, by June 1914, aviation safety specialists Tautz and Company were offering the latest in personal protective equipment in the form of the reinforced fabric 'Warren Safety Helmet'.<sup>36</sup> This cumbersome and rather uncomfortable-looking device was designed to protect the head from flying debris and purported to increase the wearer's chances of surviving a crash. However, given the inherent dangers associated

with flight, the best safety precaution that would-be aviators could make was investing in a course of flying instruction.

#### *Education-related advertisements*

Of all the categories of advertisement that appeared in the *Aeroplane* between June 1911 and June 1914, those for flying schools were numerically the most numerous. The frequency with which they appeared varied over the study period, with the highest numbers typically recorded during the spring and summer and lowest numbers during the winter when adverse weather would limit opportunities to get airborne (Figure 5). Embarrassed by the relatively slow uptake of flying in Britain, concerted efforts were made to encourage British citizens to learn to fly, not only for reasons of patriotism and national defence, but also because existing pilots increasingly viewed tuition as a relatively low-risk source of additional revenue.<sup>37</sup>

**Figure 5** The frequency of advertisements for flying tuition in the *Aeroplane*, 1911-1914.

Line colour changed to black. Misspelling corrected. Date format changed to match Fig 2. Attached as a separate file.

Following the introduction of a cheaper classified section in January 1912, the number of advertisements for flying schools proliferated as smaller schools could now afford to take out advertising space. By the outbreak of war in 1914, there were 28 flying schools in Great Britain. These institutions were responsible for training 664 new pilots before the start of the First World War.<sup>38</sup> Over 20 of these schools advertised in the *Aeroplane*. Their advertisements typically



emphasised both the speed with which prospective aviators could expect to acquire their licence and the cost effectiveness of learning to fly. The larger schools, including the Grahame-White Company, The Aeronautical Syndicate, and the British and Colonial Aeroplane Company, frequently took out full-page advertisements and encouraged new students into the air with promises of new aircraft, experienced instructors, and the latest tuition methods (Figure 6).

The Grahame-White Flying School at Hendon in north London implored potential pilots to 'Commence A Course of Tuition at the *Best School*, with the *Best Methods, Machines*, and *Mechanics*'.<sup>39</sup> Not to be outdone, the Bristol flying school claimed to possess 'the best possible equipment, the finest instructors, and the best records', and published a long list of certificates that had been awarded in the past month.<sup>40</sup> The Sopwith school at Brooklands adopted a different approach, suggesting that 'Tuition with dual control saves time and gives a better experience'.<sup>41</sup> The Hewlett and Blondeau flying school emphasised the safety of its operation, reporting (perhaps somewhat tellingly) that it was 'the only school which has never had a smash nor damaged an aeroplane'.<sup>42</sup>

**Figure 6** In common with other major flying schools, the British and Colonial Aeroplane Company frequently made reference to the quality of the tuition they offered and the safety of their machines in their advertisements in an effort to encourage potential aviators into the air.

Source *Aeroplane*, 7 August 1913, p. 143.

Image attached in separate file.

While the method of tuition and the machine on which tutees were taught varied, all schools ultimately offered to supply identical products, namely the knowledge and skills that were necessary to acquire a flying certificate from the Royal Aero Club. Given the sheer number of providers offering

flying tuition, competition was fierce and many of the larger schools offered to supply as much tuition as was necessary for their student to secure a pilot's certificate for a flat fee of £75 (reductions were available for Naval and Military Officers). Taking the commercialisation of flight instruction one stage further, the British Deperdussin Aeroplane Syndicate offered would-be aviators a complete and integrated 'learn to fly' package. For £500, a student could purchase their own monoplane with engine, tuition to Royal Aero Club certification, and hangar space at a local airfield for an entire season.<sup>43</sup>

While advertisements for flying schools accounted for the majority of all the education-related advertisements that were recorded in this theme, the significance of a (albeit smaller) number of other 'educational' products and services should not be overlooked. These included advertisements for professional training courses offered by London's Imperial College and the International Correspondence School, as well as one-off aeronautical lectures delivered by leading aviators and scientists, books about aviation (both practical and humorous), and air navigation charts. Such insights into the range of products and services that were becoming available enable the contours of the early pre-World War One aviation industry to be uncovered and indicate the rapidity with which a network of supporting infrastructure emerged to train the next generation of pilots and educate the non-flying public about aviation's importance in times of peace and war.

#### *Entertainment-related advertisements*

In addition to flying schools and other forms of aeronautical instruction, the British public was also being educated about aviation through exposure to flying shows, aerial meets, and exhibitions. Following the success of the world's first aviation meeting at Reims in 1909, a number of air meets (including events at Doncaster and Blackpool in October 1909) were staged in an effort to stimulate the British public's interest in flying. Like the continental shows they sought to emulate, the British events were designed as places of spectacle and spectatorship, consumption spaces in which leading

manufacturers could showcase their innovations, pilots could demonstrate their skills, and members of the public could gaze at the new technology on display.

At Hendon, the Claude Grahame-White Company sought to transform London's principal aerodrome into one of the capital's main attractions by staging regular air meetings in which pylon-racing, aerial joy rides, aerobatic displays, night flying by illuminated aircraft, ladies' days, and mock aerial battles would be performed to musical accompaniment. In order to publicise these events, the company began taking out regular full-page advertisements on the back page of the *Aeroplane* from April 1912 onwards to disseminate details of forthcoming events. It is reported that these events were very popular, with as many as 60,000 spectators gathering to watch major events.<sup>44</sup> Such meets were not only good publicity for the aerodrome but also a valuable additional source of revenue. Indeed, such was the popularity and public enthusiasm for aviation that, by April 1913, the Grahame-White Company reported that it had amassed over £10,000 in gate receipts alone.<sup>45</sup>

### **Discussion and conclusion**

Between 1911 and 1914, civil flying in Britain evolved from a specialist and primitive enterprise that was only pursued by a few wealthy and foolhardy individuals into a burgeoning (and potentially lucrative) commercial sector. As aircraft technology improved, so the public perception of aviation evolved with pilots and experimenters quickly promoted from the ranks of daredevils to increasingly respected industrialists and engineers. While many of the aeronautical enterprises that advertised their goods and services through the pages of the *Aeroplane* were initially 'established with some precariousness by young engineering enthusiasts, with little capital and less business experience',<sup>46</sup> the number of repeat advertisements suggests that either these companies were able to generate a sustained flow of business and revenue or that they were able to place a series of advertisements for a reduced price<sup>47</sup>. Full and half-page advertisements for many of the larger companies, including Bristol and Colonial, Gnome, and Shell, were an omnipresent feature of the *Aeroplane*, but even the classified advertisements showed a considerable degree of repeat advertising. It is not unreasonable

to assume, therefore, that the advertisers felt that the cost of advertising was more than offset by the benefits of public exposure and the sales that this helped to generate. In addition to revealing aspects of the corporate history of certain companies, the advertisements also reveal the growing variety of ways in which entrepreneurs and commercial companies sought to 'cash in' on the public's interest and enthusiasm for flying by developing an expanding range of products that the modern aviator or aeronautical student was encouraged to consume.

Whereas a pilot in 1911 only had a very limited number of goods and suppliers to draw on, by 1914 a bewildering array of products could be supplied with numerous different companies competing for custom. Many of these new products, such as specialist aeronautical clothing and safety equipment, were developed in response to emerging needs. Dunhill's Aviator's Combination Suit, for example, was promoted as a solution to the thermal discomfort pilots experienced while airborne. It was also marketed as a fashion statement: not only did it 'afford adequate protection from wind ... and gives perfect ventilation', it was also available in a choice of colours and linings, including leather, camel and fleece.<sup>48</sup> Other tailors, including A. Reed, S. Lewis, and D. Wainwright, also entered the aero clothing sector to supply fur-lined leather flying jackets, gauntlets and goggles to protect pilots from the cold. Elsewhere, prophylactic pharmaceutical products were developed to protect pilots from sensations of nausea, with 'Dr. Gimbell's Glutinous Globules' reportedly offering instant relief from airsickness.<sup>49</sup>

Reflecting the fact that aviation was a rapidly evolving, dynamic and exciting field of endeavour, an increasing number of advertisements were taken out both by individuals seeking employment as pilots or mechanics and also by companies who wanted to recruit suitably-qualified employees. While never reaching the volume associated with the other categories (only 186 'situation vacant' and 113 'situation wanted' advertisements were recorded in the 160 issues examined), the content of these advertisements (all of which appeared in the classified section) is interesting as the majority of job-hunters emphasised their 'public school' education and their desire to gain employment in the aviation industry. In addition to seeking employment/employees, the

classified pages also contained advertisements which were placed by entrepreneurs who sought investment partners and/or injections of capital together with requests to share facilities to lower development and maintenance costs. While there were no advertisements offering bank loans, there were plenty of examples of individual people seeking capital or help in kind. 'Wish Lady or Gentleman would assist Gentleman ([aged]37) with a loan of £250 to enable same to carry on invention of flying machine'<sup>50</sup> and 'Gentleman having Aeroplane at Shoreham wishes to meet with Gentlemen to share shed'<sup>51</sup> are notable examples of this genre. The level of capital investment required meant that experimenters were very keen to protect their intellectual property and a number of solicitors and legal firms took out repeat advertisements in the classified section offering to help people secure patent protection. The presence of these advertisements demonstrates that scientific discoveries relating to aeronautical knowledge and engineering were being progressively transformed into commercial assets.

In addition to providing insights into the nature of aeronautical goods and services that were becoming available during the early years of powered flight, the advertisements also reveal the spatial development of British aviation companies. In 1911 and early 1912, the majority of the advertisers were based at or near airports, such as Hendon and Brooklands, but by the beginning of 1913 the location of the companies had become more diverse. Whereas the larger companies appeared to progressively consolidate their retail and mail order operations in prestigious offices in central London and Manchester, new firms were emerging in locations as diverse as Shoreham, Doncaster, Lake Windermere, Leeds and Salisbury. Furthermore, far from being a totally masculine domain, many of the advertisements featured images of female aviators. While it is easy to make exaggerated and unsubstantiated claims about the extent to which these early advertisements presented aviation as a masculine pursuit, it is interesting that some companies (including the Lake Windermere Flying Boat Company) only ever used images of women in their advertisements. One possible interpretation is that if women could fly and felt happy to do so, then men should have no fear and would easily be capable of obtaining a pilot's certificate.

In tracing the development of the British aviation industry between 1911 and 1914, a number of important points have become apparent. The paper has demonstrated the value and potential of using advertisements as a source of empirical data and the present analysis has offered insights into practices of past mobility that may otherwise have gone unnoticed. The analysis has also shown the speed with which the early aviation industry in Britain developed and the apparent rapidity with which technological innovation enabled an increasingly sophisticated and diverse range of aeronautical products to enter the marketplace. While the material impact of the advertisements within the pages of the *Aeroplane* can never be accurately quantified, their presence allows considerable information about the sorts of aeronautical problems that were being experienced and the 'solutions' that were proposed in an effort to overcome them to be obtained. It may prove instructive, therefore, to apply this analytical technique to other periods of aviation history or, indeed, other transport sectors to further our understandings of transportation's rich cultural and commercial history.

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### **Notes**

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<sup>1</sup> I. Mackersey, *The Wright Brothers* (London, Time Warner, 2003).

<sup>2</sup> P. Fearon, 'The Formative Years of the British Aircraft Industry, 1913-1924', *Business History Review* 43: 4 (1969), 476-495.

<sup>3</sup> R. Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley, University of California Press, 1985), p. xix.

<sup>4</sup> P. Lyth, "'Think of Her as Your Mother": Airline Advertising and the Stewardess in America, 1930-1980', *Journal of Transport History* 30:1 (2009), 2.

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<sup>5</sup> M. Walsh, "See this Amazing America": the Long-Distance Bus Industry's Use of Advertising in its First Quarter Century', *Journal of Transport History* 11:1 (1990), 61-89. See also D.C.H. Watts, 'Evaluating British Railway Poster Advertising: the London and North Eastern Railway Before the Wars', *Journal of Transport History* 25:2 (2004), 23-56.

<sup>6</sup> See, for example, K. Lovegrove, *Airline Identity, Design and Culture* (London, Laurence King, 2000); G. Szurovy, *The Art of the Airways* (MN, St Paul, MBI Publishing, 2002); M. Remnele, *An Invitation to Fly: Poster Art in the Service of Civilian Air Travel* in A. von Vegesack and J. Eisenbrand (eds), *Airworld Design and Architecture for Air Travel* (Weil am Rhein, Vitra Design, 2004), pp. 230-262; J. G. London, *Fly Now! A Colorful Story of Flight from Hot Air Balloon to the B777 "Worldliner"* (Washington D.C., National Geographic Society, 2007); C. Cruddas, *100 Years of Advertising in British Aviation* (Stroud, The History Press, 2008).

<sup>7</sup> Although the *Aeroplane* continued to be published long after this date, 25 June 1914 represented the date of the last sequential pre-war issue that was held in the archive.

<sup>8</sup> G. Wallace, *Flying Witness. Harry Harper and the Golden Age of Aviation* (London, Putnam, 1958).

<sup>9</sup> A. Berget, *The Conquest of the Air. Aeronautics Aviation History: Theory and Practice* (London, William Heinemann, 1909).

<sup>10</sup> On which see R. Wohl, *A Passion for Wings. Aviation and the Western Imagination 1908-1918* (New Haven, Yale University Press, 1994).

<sup>11</sup> Cited in G. Wallace, *Flying Witness. Harry Harper and the Golden Age of Aviation* (London, Putnam, 1958), p. 138.

<sup>12</sup> A. Gollin, *No Longer an Island: Britain and the Wright Brothers 1902-1909* (London, Heinemann, 1984).

<sup>13</sup> C. Gibbs-Smith, *Aviation. An Historical Survey from its Origins to the End of World War II* (London, HMSO, 1970), p. 152.

<sup>14</sup> B. Walters, *The Illustrated History of Air Travel* (London, Marshall Cavendish, 1979).

<sup>15</sup> M. J. Bernard Davy, *Air Power and Civilisation* (London, George Allen and Unwin, 1941), p. 87.

<sup>16</sup> Wohl, *A Passion for Wings*.

<sup>17</sup> H. Driver, *The Birth of Military Aviation: Britain, 1903-1914* (Woodbridge, Suffolk, Boydell Press, 1997) p. 17.

<sup>18</sup> F. A. Magoun and E. Hodgins, *A History of Aircraft* (New York, Whittlesey House, 1931).

<sup>19</sup> Watts, 'Evaluating British Railway Poster Advertising'.

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<sup>20</sup> *Aeroplane*, 8 June 1911, p. 3.

<sup>21</sup> In comparison, *Flight* did not routinely contain advertisements until the early 1940s.

<sup>22</sup> C. G. Grey (Editorial) *The Aeroplane*, 8 June 1911, p. 3.

<sup>23</sup> B. Berelson, *Content Analysis in Communication Research* (Glencoe, IL, Free Press, 1952), p. 18.

<sup>24</sup> Some of this growth can be explained as a function of the introduction of a classified section in 1912, but even when the classified advertisements are discounted, the average number of advertisements per issue still grew indicating that the market for aeronautical goods and services was expanding actively during the period.

<sup>25</sup> c.f. R Marchand, *Advertising the American Dream*, on the use of testimonial advertising by American automobile manufacturers.

<sup>26</sup> *Aeroplane*, 11 January 1912.

<sup>27</sup> *Aeroplane*, 18 July 1912, p. 103.

<sup>28</sup> H. Stevenson, *American Automobile Advertising 1930-1980: an Illustrated History* (Jefferson, North Carolina, McFarland and Co, 2008).

<sup>29</sup> *Aeroplane*, 3 August 1911, p. 207.

<sup>30</sup> *Aeroplane*, 20 July 1911, p. 155.

<sup>31</sup> *Aeroplane*, 5 September, 1912.

<sup>32</sup> The development and widespread application of aircraft dope, a special liquid coating that was applied to the skin of aircraft to waterproof and tighten the fabric and give it a taut 'drum-like' appearance, provides an interesting example of how developments in chemical engineering were being applied to aviation to improve the properties of existing materials.

<sup>33</sup> The manufactures of Emaillite focused on their product's attributes, reporting that it 'tightens, smoothes [and] strengthens the fabric' (*Aeroplane*, 5 September 1912), while the producers of Cellon dope reported that their formula was 'used by all the leading British and European aeroplane builders' (*Aeroplane*, 11 July 1912).

<sup>34</sup> *Aeroplane*, 27 July 1911, p. 185.

<sup>35</sup> *Aeroplane*, 14 December 1911, p. 670.

<sup>36</sup> *Aeroplane*, 25 June 1914.

<sup>37</sup> W. F. Burbidge, *From Balloon to Bomber. A Complete History of Aviation from Earliest Times until the Present Day* (Bognos Regis, John Crowther, 1946).



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<sup>38</sup> R. Dallas Brett, *History of British Aviation, 1908-1914* (London, John Hamilton, 1933).

<sup>39</sup> *Aeroplane*, 14 December 1911, p. 653 (emphasis in original).

<sup>40</sup> *Aeroplane*, 4 July 1912.

<sup>41</sup> *Aeroplane*, 4 July 1912.

<sup>42</sup> *Aeroplane*, 4 April 1912, p. 323.

<sup>43</sup> *Aeroplane*, 22 February 1912.

<sup>44</sup> *The Times* Imperial and Foreign Trade Supplement, *The British Aircraft Industry. Its Industrial and Commercial Potentialities* (London, Hodder and Stoughton, 1918).

<sup>45</sup> Driver, *The Birth of Military Aviation*.

<sup>46</sup> *Ibid.*

<sup>47</sup> Although there is no evidence in the archive that reduced rates were available to repeat advertisers, it is not unreasonable to suggest that they may have been.

<sup>48</sup> *Aeroplane*, 18 July 1912.

<sup>49</sup> *Aeroplane*, 29 June 1911, p. 83.

<sup>50</sup> *Aeroplane*, 26 June 1913, p. 750.

<sup>51</sup> *Aeroplane*, 25 January 1912, p. 93.

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