

The Hungarian Air Service, 1918-45

Stephen Renner  
New College  
University of Oxford

Thesis submitted in fulfilment of the requirements for the degree of  
Doctor of Philosophy in Modern History

Trinity Term 2014

## ABSTRACT

The Hungarian Air Service, 1918-45

Stephen Renner, New College  
DPhil Thesis, Trinity Term 2014

This thesis is a narrative and analytical history of the Hungarian air service. It follows its development from the Allied intervention of 1919 through the end of the Second World War. Denied an air force by the Treaty of Trianon, Hungarian airmen determined to thwart the inspection system and preserve national air power. The prohibition against military aviation persisted after the Commission was withdrawn, and through Hungarian diplomatic efforts, a relationship was established with Italy that included substantial assistance to the clandestine Hungarian air service.

This low-grade arms build-up continued through the 1930s, during which there was a robust discussion about air power theory and the nature of future aerial warfare in *Magyar Katonai Szemle* [Hungarian Military Review]. After the rise of Hitler, Germany offered arms credits and support for Hungary's obsession with regaining the territory lost in the post-war settlement. The air service grew mainly through imported aeroplanes, the purchase of which ceased to be secret after the Little Entente recognised Hungary's equality of arms.

The Hungarian air force became independent in 1939, and enjoyed public acclaim after decisive air-to-air victories over Slovak pilots during the occupation of Upper Hungary. The General Staff never accepted its autonomy, however, and succeeded in reclaiming control of the air force in 1941. After Hungary joined the Axis invasion of the Soviet Union, the air force provided air defence and interdiction in support of the Rapid Corps. Its mounting losses were made good by German aeroplanes, some of which were produced in Hungarian factories. As the Allied bombing campaign against Hungary intensified in 1944, most of its aircraft were devoted to homeland defence. The force ceased to exist as a true national service after the German-led coup in October 1944, but continued a fighting withdrawal to the west until captured by American forces.

## LONG ABSTRACT

The Hungarian Air Service, 1918-45

Stephen Renner, New College  
DPhil Thesis, Trinity Term 2014

Hungary's position in the interwar period is without analogue. It was defeated, disarmed, dismembered, and, as a result, desperate for revision. Under the terms of the Treaty of Trianon, Hungary lost two-thirds of its area and over half of its population. In the name of Wilsonian self-determination, over three million Magyars were separated from their homeland. Hungarians of nearly every class and political orientation regarded the treaty as manifestly unjust, and its revision became the guiding light of Hungarian political life. Popular resistance to Trianon was expressed in two ubiquitous phrases of the inter-war years: '*Nem! Nem! Soha!*' (No! No! Never!), and '*Mindent vissza!*' (Everything back!).

Rearmament was absolutely central to Hungary's revanchist ambitions. This programme of rearmament proved extremely difficult due to an aggregation of constraints that was unique in Europe. Hungary was the only country in Europe that was at the same time conquered, small and revisionist. Its neighbours were created or significantly enlarged at Hungary's expense, they had formed a treaty alliance against Hungary, and they enjoyed the patronage of the western powers. Eventually Italy and then Germany would assist Hungarian rearmament, but as both were engaged in their own military expansion, items approved for export were rarely state-of-the-art technology. Hungary, then, found itself in this situation: it was determined to rearm in pursuit of its foreign policy objectives, despite the prohibition of international law; its own industrial sector was unable to produce complex weaponry in sufficient numbers; and its import stream was irregular and generally comprised the suppliers' cast-offs. Building a viable air force under these conditions would prove to be extremely difficult.

Chapter 1, Legacy: 1811-1918. The history of Hungarian aviation began with a balloon flight in a meadow outside Budapest. Until the beginning of the First World War, Habsburg aviators kept pace with global advances in the field, and in some cases found themselves on its leading edge. As long as flight remained the province of visionaries and artisans, Austria-Hungary, blessed with superb technical universities and a small but highly skilled guild of craftsmen, held its own among the European powers. That ceased to be true in 1914. The advent of the First World War laid bare the monarchy's many structural problems. Austria-Hungary entered the Great War with an under-sized air service that was starved of funds and plagued by inefficiency, supplied by an industrial base insufficient for mass production of aircraft, and directed by an acquisition policy that stifled competition and innovation. Domestic firms, which included the Viennese and Brno factories, could not supply the Luftfahrtruppen's needs, and Austria-Hungary had to turn to German imports and licence production to replace wartime losses.

Chapter 2, Upheaval: 1918-20. The post-imperial national flying corps was formed from the remnants of the Habsburg service, and was characterised by a high degree of continuity with the Luftfahrtruppen in personnel, organisation and employment. Before the armistice was signed, Hungarian airmen went to work organising themselves and moving aviation matériel to the country's interior to protect it from the advancing Allies. The rescued

equipment was used in air policing, reconnaissance and propaganda flights by the National Council government. Months later, the same airmen conducted combat operations against Romanian and Czechoslovak forces under the red flag of Béla Kun's Hungarian Soviet Republic. After the collapse of the Red Army in August 1919, Hungarian aviators again scrambled to preserve aircraft and supplies from occupation forces, although with less success than in 1918. The air service available to Admiral Horthy's counter-revolutionary government was seasoned and motivated, but severely under-equipped.

Chapter 3, Evasion: 1920-27. The situation would only get worse. The terms of the Paris treaty denied Hungary an air force, and the Entente established an inspectorate to ensure the enforcement of Trianon's military, air and naval clauses. Under Horthy's regency, the armed forces sought to evade and obstruct Allied inspectors at every turn. The government promoted the development of commercial aviation as an engine of economic growth in its own right, as well as a front for prohibited military flight operations. Meanwhile, Hungarian diplomats worked to break Budapest's post-war isolation and its financiers tried to entice investment from abroad. By 1927 these efforts had begun to bear fruit. The finance minister had secured 300 million koronas in foreign loans. In March, the Allies terminated the Control Commissions, having decided that nothing further was to be gained by continued inspections. In April, Prime Minister Bethlen signed a Treaty of Friendship, Conciliation and Arbitration with Mussolini.

Chapter 4, Theory: 1927-37. The period of clandestine rearmament was a fertile time for Hungarian engagement with air power theory. Until the early 1930s, material shortfalls were matched by an intellectual deficit. Since before the First World War, Hungarian ideas about the employment of air power had been conditioned primarily by immediate tactical needs and improvements in technological capability. This began to change in 1931, after an abridged translation of one of Giulio Douhet's works appeared in the Hungarian military journal *Magyar Katonai Szemle*. MKSz's aviation editor, a disciple of Douhet, flooded the market with pieces that extolled the devastating effect of unrestricted aerial warfare. Dissenters eventually joined the fight, and there emerged a robust discussion about the prospects of a quick victory from the air, the inherent difficulties of accurate bombing, the role of air defence, and the importance of army cooperation. In the end, Hungarian airmen agreed to an expansive air strategy that placed an independent bombing campaign at the forefront, but also included the less glamorous tasks of aviation. In terms of particular aircraft models, Hungary was left with few choices. Without the technical capacity to produce combat aircraft of its own specification, the Hungarian air service was forced to accept whatever aeroplanes Italy and Germany were willing to release for export.

Chapter 5, Reality: 1927-37. Successes in 1927 made rearmament possible, if not permissible. Trianon's military restrictions remained in place, but the instrument for their implementation was removed, and the Allies' will for enforcement greatly diminished. Hungarian leaders commenced a secret rearmament programme. Where the efforts of the previous seven years had focused on preserving and maintaining stocks of equipment of largely First World War vintage, the next decade would demand actual expansion, at a time of increasing technological advances in aviation. As in the war, domestic manufacturing was not equal to the task, and Hungary had to rely once again on imports to supply its air service. These imports came first of all from Italy, but after Hitler's accession to the chancellorship, German interest in Hungary grew, as did its willingness to provide aircraft and training. Increased military cooperation with Germany brought its own problems in the form of a

civil-military conflict within Hungary, as many senior officers, inclined toward a pro-German position for professional, ideological and often ethnic rationales, advocated openly for strengthening ties with Berlin. Horthy himself was wary of growing German power, but through this period did little to discourage his general staff's attempts to drive Hungary closer to Nazi Germany.

Italian and German willingness to bankroll Hungarian rearmament varied with the changes in the international environment. In 1938, the Little Entente recognised Hungary's right to rearm, and war between Germany and the West over Czechoslovakia appeared imminent. The heightened tensions highlighted the difficulty for Hungary in managing relations with its patrons. Hungarian, German and Italian aims were often, but not always, congruent. Italy increased its support of the Magyar Királyi Honvéd Légierő (Royal Hungarian Air Force) through additional exports and by establishing a flight school for MKHL pilots. Despite Italian aid, German assistance remained vital to the MKHL's rearmament. That support came at a cost: every arms deal with Germany bound Hungary slightly closer to the Nazi state, which in turn hardened western attitudes and encouraged Hungarian fascists. Horthy was aware of this dynamic and occasionally tried to slow Hungary's movement toward Germany, but a complete severing of ties between Budapest and Berlin was neither feasible nor desirable. Germany had grown too powerful for Hungary to resist, and only Hitler offered the Magyars real hope for the overthrow of Trianon.

Chapter 6, Independence: 1938-40. Hungarian national life began to speed up in 1938. This year would see the effective end of Trianon, the disintegration of the Little Entente, the recognition of armament rights, and the reoccupation of lands lost to Czechoslovakia. For the Hungarian armed forces, the period was one of growth in both quantity and quality. The air service was officially acknowledged and granted bureaucratic independence from the army. There was war in 1939—for Hungary a short border fight with Slovakia—but Budapest managed to remain a non-combatant in the fight that began between Germany and Poland. Even as the government basked in its triumphs, however, there were serious concerns that the alliance with Germany, the mechanism that had produced such wonders in two years, was fatally flawed. As 1940 came to a close, Hungarian airmen had cause to worry for their service. It had gone from a clandestine branch of the army to an independent and modernising force, and had played a dramatic role in the national triumph over Slovakia. But its leaders had been over-zealous in promoting the new arm, and the MKHL's failure to address satisfactorily a range of equipment, training, and operational errors had put independence at risk.

Chapter 7, War: 1941-45. In 1941, Hungary joined the Axis war. The Honvéd entered the German campaigns against Yugoslavia and the Soviet Union late, but with great eagerness on the part of the officer corps, who believed in the harmony of German and Hungarian interests, and in the invincibility of German arms. After the bombing of Kassa in late June 1941, the MKHL launched a pair of retaliation raids against Soviet cities. Although the identity of the Kassa bombers was in doubt even at the time, the Hungarian government deployed its Rapid Corps, and the MKHL organised a composite force to support the army in southern Russia. This expeditionary unit, equipped primarily with Italian aircraft, conducted reconnaissance and interdiction missions through the end of 1941. In 1942, the 2nd Aviation Brigade accompanied the Hungarian 2nd Army to the Don River, and remained on the front for over a year, even after the destruction of the 2nd Army in January 1943. Its independence dwindled as losses mounted. Replacement aircraft came from

Germany, and with more capable aeroplanes came greater oversight, until the MKHL on the eastern front was little more than a Luftwaffe auxiliary force.

By the autumn of 1944, that was true even in Hungary. The MKHL had been recalled early in the year from the eastern front to defend against Allied bombing attacks. Allied bombers targeted aircraft factories and forced defensive fighters into lopsided engagements. The defenders occasionally inflicted more losses than they suffered, but the Allies' overwhelming material advantage meant that even the MKHL's rare victories were strategically meaningless. The October putsch engineered by the Nazis that imprisoned Admiral Horthy and installed a Hungarian fascist government made little operational difference to the MKHL, which was by then a force in unalterable decline, unable to exercise initiative. Its personnel nonetheless remained committed to the fight against the advancing Soviet forces. As in 1919, Hungarian airmen defended their country until they no longer had airfields from which to operate, and then they attempted to salvage as many aircraft as possible from the invaders.

Conclusion. The Second World War ended for Hungarian airmen in a manner very much like the First World War and the post-war intervention. In many ways, the overall experience of the Magyar Királyi Honvéd Légierő was remarkably similar to that of the Habsburg Luftfahrtruppen. That this would prove to be so might have come as a surprise to readers of *Magyar Katonai Szemle*, where a Douhetian future of unrestricted air warfare had been predicted, in which the heart of the enemy was laid open to direct attack by fleets of bombers impervious to air defence, and capable of destroying the adversary's will to resist. As it happened, the closest Hungarian bombers ever got to a strategic attack was the two-day retaliation campaign against Stanislau and Strij. The MKHL, like the Luftfahrtruppen and the Hungarian Red Flying Corps, was a tactical air force whose primary missions were air defence, aerial reconnaissance, and battlefield interdiction.

## TABLE OF CONTENTS

	Acknowledgements	viii
	Abbreviations	ix
	Notes	xi
Chapter 1	Legacy: 1811-1918	1
Chapter 2	Upheaval: 1918-20	44
Chapter 3	Evasion: 1920-27	77
Chapter 4	Theory: 1927-37	110
Chapter 5	Reality: 1927-37	149
Chapter 6	Independence: 1938-40	196
Chapter 7	War: 1941-45	245
	Conclusion	307
	Bibliography	312

## ACKNOWLEDGEMENTS

I would like to thank my supervisors, Professors Robert J.W. Evans and Sir Hew Strachan for their guidance, perceptive insights, and encouragement. A finer supervisory team I cannot imagine.

Professors Patricia Clavin, Robert Johnson and Martin Conway gave elements of the thesis very close readings during the Transfer and Confirmation of Status.

For his assistance on matters of style and grace, and for excising as many infelicities as possible, I shall always be grateful to my friend Mr Rodney Allan.

I could not have completed this thesis without the assistance of the archivists in Budapest: at the Defence Ministry Archives and Library, Mr Balázs Kiss and Ms Judit Hegedűs; at the National Archives, Ms Ildikó Szerényi and Mr Ádám Török; at the Transportation Museum and Archives, Mr Sándor Krizsán. Dr Zsuzsanna Varga wrote a marvellous letter of introduction to smooth my way to the Defence Ministry Archives. I am especially indebted to Professor M.M. Szabó, (Lt Gen, ret), author of the best works on the Hungarian air force. Professor Szabó is a tireless correspondent and made time to meet me in Budapest. That meeting was facilitated by János Iaszegi, PhD, (Maj Gen, ret), who also helped me with publications from Zrinyi Press. Colonel Greg Clawson and his wife Laura provided amazing hospitality during my trips to Hungary. Professor Eric Weaver pointed me to critical sources and provided invaluable editorial assistance throughout the project. I thank my extraordinary friends, Szabolcs Takács and Andrea Szentendrei, whose calls and emails on my behalf are the least of their contributions.

The faculty of the US Air Force School of Advanced Air and Space Studies have such enthusiasm for their work that I was inspired to try to join them. Professors Tom Hughes, Rich Muller and Hal Winton have been particularly helpful with the thinking and writing; Professors Steve Chiabotti and Steve Wright and Ms Sheila McKitt have been wonders of administrative support.

My parents, Gene and Ginny Renner, raised me with a love of reading, which has led indirectly to this project.

Finally, I thank my wonderful wife, Jenny. For everything.

## ABBREVIATIONS

AAA	Anti-aircraft artillery
AICC	Aeronautical Inter-Allied Commission of Control
BCR	Battle-Combat-Reconnaissance
CAM	Corpo Aeronautica Militare
DBFP	Documents on British Foreign Policy
DRT	Dél-olasz Repülő Tanfolyam [South Italy Flying Course]
Flik	Fliegerkompagnien
HFP	Hadsereg főparancsnokság [Army general headquarters]
<i>HK</i>	<i>Hadtörténelmi Közlemények [Military History Bulletin]</i>
HSR	Hungarian Soviet Republic
LA	Luftschifferabteilung
Lepság	Légierő parancsnokság [Air force headquarters]
LFT	Luftfahrtruppen [Aviation troops]
LHT	Legfelső Honvédelmi Tanács [Supreme Defence Council]
LÜH	Légügyi Hivatal [Aviation Bureau]
IMCC	Inter-Allied Military Commission of Control
MAA	Militär Aeronautische Anstalt
MAEFORT	Magyar Aeroforgalmi Részvénytársaság [Hungarian Air Traffic Company]
MÁG	Magyar Általános Gépgyár [Hungarian General Machine Factory]
MALERT	Magyar Légiforgalmi Részvénytársaság [Hungarian Air Transport Company]
MARE	Magyar Repülőgépgyár [Hungarian Aircraft Factory]
MASz	Magyar Aero Szövetség [Hungarian Aero Club]
MÁVAG	Magyar Állami Vas-, Acél- és Gépgyárak [Hungarian State Iron, Steel and Machine Factory]
MKHL	Magyar Királyi Honvéd Légierő [Hungarian Royal Air Force]
<i>MKSz</i>	<i>Magyar Katonai Szemle [Hungarian Military Review]</i>
MLG	Motor-Luftfahrzeug-Gesellschaft
MWG	Magyar Waggon és Gépgyár [Hungarian Wagon and Machine Factory]
OLP	Országos Légvédelmi Parancsnokság [National Air Defence Headquarters]
RA	Regia Aeronautica

RLM	Reichsluftfahrtministerium
UFAG	Ungarische Luftschiff und Flugmaschinen AG
VKF	Vezérkarfönökség [General Staff]
VR	Vörös Repülőcsapat [(Hungarian) Red Flying Corps]
WKF	Wiener Karosserie und Flugzeugfabrik
WM	Manfréd Weiss

## NOTES

Archival material for this thesis came primarily from the Hungarian Defence Ministry archives in Budapest. Most of the air force's own documents were destroyed in the Second World War, but sizeable elements of the Defence Ministry and General Staff archives relate to aviation matters. The Defence Ministry archives also contain a number of unpublished manuscripts and memoirs. János Veszényi's manuscript was extremely helpful, as was László Winkler's un-paginated scrapbook of documents, photographs and press reports. In the Defence Ministry archives library can be found *Magyar Katonai Szemle*, the professional journal of the Honvédség, and the primary source for the discussion of air power theory in chapter four. The Hungarian National Archives hold Admiral Horthy's papers, among which were his hand-written notes from the 1938 presentation on air force independence. The Hungarian Transportation Museum and Archives has valuable information on the Hungarian airlines and sport aviation. Other primary sources include various document collections of the Hungarian, German and British foreign ministries, along with the printed confidential documents of Miklós Horthy. The destruction of the MKHL archives means that important operational details have been lost; in particular, those relating to logistics and intelligence, which would not have been addressed in General Staff or Ministry records, and which might have seemed less important to memoirists or oral historians.

The most important secondary works on the Magyar Királyi Honvéd Légierő have been authored by Dr M.M. Szabó. His *MKHL 1938-1945* is the best work on the subject, includes the major elements of his earlier work, and has extensive documentation. *Fejezetek a magyar katonai repülés történetéből*, co-authored by Szabó with S. Nagyvárad and L. Winkler, is the most useful guide to the early years of Hungarian military aviation; its reference notes are less complete than *MKHL 1938-1945*, but it includes something rarely found in other Magyar books on the topic—an index. The journal *Hadtörténelmi Közlemények* carries the most relevant recent articles on military history. There are few English-language works on the Hungarian air force, and with the exception of the newly published *Baptism of Fire* by Csaba Stenge, those rely on personal reminiscences or German works. For the Habsburg aviation experience, the best work is the unwieldy but tremendously informative *Austro-Hungarian Army Aircraft of World War*, by Grosz, Haddow and Schiemer,

Memoirs play an important role in determining personal experiences and filling in crucial details, but due to the hyper-politicisation of Hungarian life in the 20th century, they must be used with caution. Issues of motivation, both one's own and attribution to others, seem especially susceptible to post-hoc revision. Works published in Hungary during the Communist period have the obligatory references to the 'imperialists' and 'counter-revolutionaries', but deeper biases exist. The Kassa bombing scarcely figures in pre-1990 journals in Hungary. Magyar-language works published by emigrants to the West have the same tendency toward self-justification, exacerbated by Cold War tensions.

For understanding Hungary's political situation in the period, C.A. Macartney's *October Fifteenth* and Gyula Juhász's *Hungarian Foreign Policy 1919-1945* were indispensable.

Unless otherwise noted, all translations from Hungarian are my own.

## Chapter 1

### Legacy: 1811-1918

The first Hungarian aviator took to the sky on the 3 June 1811.<sup>1</sup> Dr Károly Menner climbed into a basket suspended beneath a decorated fabric envelope on the outskirts of Pest, in a meadow that eighty-five years later would host the national millennial celebration.<sup>2</sup> By 1896, balloon flight had become sufficiently routine that, for the price of a single korona, a visitor to the *millenniumi ünnepség* in the Budapest city park could ride in a captive balloon to a height of 500 metres.<sup>3</sup> Francis Joseph himself visited the exhibitions, and although he apparently did not chance a flight, some 7,000 of his subjects did.<sup>4</sup> Those Hungarians who took to the air with Monsieur Godard joined the growing number of aviation enthusiasts across Europe. Captive balloon rides were common at major expositions of the time: the 1893 Chicago World's Fair and Antwerp's 1894 Exposition featured them, as did the 1896 India and Ceylon Exhibition at Earls Court, and the Paris Exposition beginning in 1867.<sup>5</sup> Paris's precocity was no surprise, since Frenchmen pioneered ballooning in 1783, and from the middle of the nineteenth century France 'had total unsurpassed dominance in aviation'.<sup>6</sup>

---

<sup>1</sup> Z. Bődök, *Magyar feltalálók a repülés történetében* (Dunaszerdahely, 2002), p. 21.

<sup>2</sup> J.F. Holló, *A Galambtól a Griffmadárig: a magyar katonai repülés 100 éve* (Budapest, 2010), p. 8.

<sup>3</sup> Price and height: 'Ballon Captif Godard' poster, 1896

<<http://posters.navtech.aero/pages/00192.html>> accessed 8 Nov. 12. One korona was approximately 1 shilling (the 1896 exchange rate was 1 GBP to 24 Kr). See M.A. Denzel, *Handbook of World Exchange Rates, 1590-1914* (Farnham, 2010)

<sup>4</sup> Francis Joseph's attendance: Holló, *Galambtól a Griffmadárig*, 12; number of balloon flights: text accompanying 'Ballon Captif Godard' poster.

<sup>5</sup> Chicago: 'Balloon Park' poster, 1893 <<http://posters.navtech.aero/pages/00213.html>>; Antwerp: 'Chateau Aerien' broadside advertisement, 1894 <<http://www.tipsimages.it>>; Advertisement, *The Times*, 18 Apr 1896 <<http://www.victorianlondon.org/entertainment/indiaandceylon.htm>>; Paris: 'Ascension Captive' broadsheet advertisement, <<http://www.tipsimages.it>>; all accessed 8 Nov. 12.

<sup>6</sup> R.P. Hallion, *Taking Flight: Inventing the Aerial Age from Antiquity through the First World War* (New York, 2003), p. 123.

Despite Austria-Hungary's relatively late start (Italian, American and Scottish aeronauts had flown as early as 1784), for the century following Dr Menner's flight, Habsburg aviation kept pace with global advances and in some cases found itself on the leading edge.<sup>7</sup> As long as flight remained the province of visionaries and artisans, Austria-Hungary, blessed with superb technical universities and a small but highly skilled guild of craftsmen, held its own among the European powers. That ceased to be true in 1914, at the time when the world that awarded aviators cash prizes for feats of aerial navigation gave way to one in which airmen earned military honours for artillery observation. The advent of the First World War laid bare the monarchy's many structural problems that had been masked by the intellectual glitter of *fin de siècle* Vienna and Budapest. Austria-Hungary entered the Great War with an under-sized air service that was starved of funds and plagued by inefficiency, supplied by an industrial base insufficient for mass production of aircraft, and directed by an acquisition policy that stifled competition and innovation. In the end, 'the story of wartime Austro-Hungarian aviation is one of inadequacy and dependence upon Germany'.<sup>8</sup>

Such judgments lay decades in the future, and indeed Germany did not yet exist as a united political entity when, in 1849, Austrian forces conducted the world's first aerial bombardment. Franz von Uchatius, a lieutenant in Marshal Radetzky's army besieging Venice, oversaw the construction and release of up to one hundred paper and linen balloons

---

<sup>7</sup> In this chapter I include in Hungary's aviation heritage those developments within the Dual Monarchy that may have been achieved outside the borders of St Stephen's realm. While one should expect that innovation by ethnic Magyars would have had special resonance for the Hungarian public, there is every reason to think that for Habsburg aviators themselves proximity and access to the results of technical advances would have counted far more than the nationality of the innovators. In particular, I treat the experience of the Monarchy's Common Army and its air service as a legacy shared by all the successor states.

<sup>8</sup> J.H. Morrow, *German Air Power in World War I* (Lincoln, Ne., 1982), p. 267.

armed with twenty-five-kilogram bombs and delayed fuses.<sup>9</sup> The Austrians hoped the balloon-borne bombs ‘would devastate the city, and they also launched others from the deck of the side-wheel steamer *Vulcano*, the first use of offensive “air power” from the sea.’ Unpredictable winds favoured the Italians, however, and the balloons scattered, some of them falling among Austrian forces, who, fearing for their own safety, did not attempt further attacks.<sup>10</sup>

Although successful bombardment from aircraft would be delayed for half a century, the value of balloons as observation platforms was demonstrated during the American Civil War. The chief of the US Army Signal Corps lavished praise on an observer in a telegraph-equipped aerostat: ‘It may be safely claimed that the Union army was saved from destruction...by the frequent and accurate reports’. One year later, a similar Union observation balloon carried aloft on his first aviation experience a twenty-five year-old Württemberg cavalry officer, Ferdinand Graf von Zeppelin.<sup>11</sup> Zeppelin, whose airships later terrorised England on behalf of Imperial Germany, fought with the Habsburgs against Prussia in the 1866 *Bruderkrieg*. The Austrian army hastily formed an aviation unit when the Prussians approached Vienna, but the inexperienced ground crew lost the single balloon, putting an end to the experiment.<sup>12</sup> During the 1871 siege of Paris, balloons were pressed into service as transport, and successfully carried 1.5 million letters and 102 passengers out of the surrounded capital.<sup>13</sup> In the aftermath of its stunning defeat, the French army

---

<sup>9</sup> Uchatius: P.M. Grosz et al., *Austro-Hungarian Army Aircraft of World War One* (Mountain View, Ca., 1993), p. 2; up to 100 balloons: Hallion, *Taking Flight*, p. 66, and G.E. Rothenberg, ‘Military Aviation in Austria-Hungary, 1893-1918’, *Aerospace Historian*, Vol. 16 (1972), p. 77; 25-kg bombs: S. Nagyváradí et al., *Fejezetek a magyar katonai repülés történetéből* (Budapest, 1986), p. 11.

<sup>10</sup> Hallion, *Taking Flight*, p. 66.

<sup>11</sup> Ibid. pp. 68, 94.

<sup>12</sup> Rothenberg, ‘Military Aviation’, p. 77.

<sup>13</sup> Hallion, *Taking Flight*, p. 72.

undertook serious reform. Among the initiatives was the establishment of a balloon section, the world's first permanent military aeronautics institution.<sup>14</sup> Great Britain followed the French example in 1882, as did Russia, Germany, Italy and Spain two years later.

The first Austro-Hungarian balloon section was formed in 1893, although eight volunteer officers had received balloon training in 1890 from Viktor Silberer, a well-known Viennese civilian pilot.<sup>15</sup> The MAA (*Militär Aeronautische Anstalt*) was established at the Vienna Arsenal under the command of Lieutenant Josef Trieb, the first Habsburg military balloon pilot.<sup>16</sup> The section, initially composed of two officers and thirty men, was attached to the First Fortress Artillery Regiment and was considered an auxiliary to the garrison artillery.<sup>17</sup> The MAA acquired its first dedicated military balloon in 1896, a 600-cubic-meter, hydrogen-filled spheroid capable of tethered or free flight. Its next purchases would be the newly designed Parseval 'sausage' balloons, whose streamlined shape was more stable and therefore could be operated in higher winds than the older round aerostats.<sup>18</sup> The Habsburg navy conducted annual exercises between 1902 and 1907 with one of the army's balloon sections, but after concluding that the practical problems of wind, storms and corrosive salt water outweighed advantages in observation, discontinued the exercises and did not adopt balloons.<sup>19</sup> At the outbreak of the First World War, Austria-Hungary would have twelve balloon units in service: eight on the northern front, and four in the south.<sup>20</sup>

---

<sup>14</sup> L. Kennett, *The First Air War, 1914-1918* (New York, 1991), p. 3.

<sup>15</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 2.

<sup>16</sup> Holló, *Galambtól a Griffmadárig*, p. 12.

<sup>17</sup> Rothenberg, 'Military Aviation', p. 77.

<sup>18</sup> Nagyváradai et al., *Fejezetek a repülés történetéből*, p. 11.

<sup>19</sup> K. Csonkaréti and G. Sárhidai, *Az Osztrák-Magyar Monarchia tengerészeti repülői, 1911-1918* (Budapest, 2010), p. 21.

<sup>20</sup> Holló, *Galambtól a Griffmadárig*, p. 12; Nagyváradai et al., *Fejezetek a repülés történetéből*, p. 11.

That the balloon had some military utility was by the 1880s firmly established, but that utility was limited as long as the balloons remained at the mercy of the wind. During the 1871 siege, ‘though many balloons had flown *from* Paris, not a single attempt to fly a balloon *to* Paris had succeeded’.<sup>21</sup> The first flight of a steerable airship took place in Paris in 1852, and experimentation continued with limited success for three decades before a true breakthrough occurred. In 1884, two French army officers piloted their 165-foot-long, streamlined, electrically powered airship, *La France*, on a twenty-three-minute flight and returned to the launch site, having completed the first powered flight in history. For a number of administrative and financial reasons, the men were unable to capitalise on their feat and produce a bigger, more capable airship.<sup>22</sup> In contrast to the semi-rigid, battery-powered *La France*, some inventors were pursuing rigid, petrol-engined designs. Among them was a Hungarian-born Croatian timber merchant turned self-taught airship designer named David Schwarz.

Schwarz envisioned a solid all-metal airship, which was a revolutionary departure from the fabric envelopes used by all other airship builders of the time. His critical contribution to the field was an enthusiasm for aluminium: his design used the new metal for both frame and skin. Aluminium had been discovered in 1827, and the first block fit for industrial use was offered at the 1855 Paris World Exposition. Schwarz may have become familiar with its properties through a sawmill component, or perhaps only by reading available scientific literature, but in any case he was convinced of aluminium’s suitability for airship construction. Schwarz’s proposal was rejected by Vienna, but the Russian attaché

---

<sup>21</sup> Hallion, *Taking Flight*, pp. 81-3, 87. Airborne messages went into Paris via carrier pigeon.

<sup>22</sup> *Ibid.* p. 87.

recommended him to St Petersburg, where he eventually won a contract.<sup>23</sup> The resulting airship was not successful, but his design brought him to the attention of the Prussian war ministry, which granted him use of the Tempelhof balloon development facilities, to the chagrin of a competitor, Ferdinand von Zeppelin.<sup>24</sup> The fruit of Schwarz's collaboration with the German metallurgist Carl Berg finally flew in November 1897. Kaiser Wilhelm was present for the test flight, but Schwarz was not, having died earlier that year.<sup>25</sup> Due to the failure of a propeller belt, the airship crashed upon landing, and no further Schwarz models were built. Zeppelin, present at the demonstration and impressed by the aluminium frame, negotiated with Schwarz's widow for its rights, and thereafter incorporated the Schwarz-Berg aluminium into his airships' designs.<sup>26</sup>

The growing capability of dirigible airships, particularly those of Zeppelin and the Frenchman Lebaudy, led to increased interest on the part of military planners. By 1905, both the German and Italian armies were studying the airship's possibilities as a weapon; the French Army had already acquired a Lebaudy dirigible and 'had begun a variety of tests with the new airship, including its use for reconnaissance, for directing artillery fire, and for bomb dropping.' There had been less enthusiasm for the airship in Britain, but French and German naval interest was contagious, and in 1909 the Royal Navy began to build its own dirigible.<sup>27</sup> The British aviation magazine *Flight* noted that 1908 German expenditures on aviation had amounted to nearly £400,000 (£265,000 of which came from private

---

<sup>23</sup> Bődök, *Magyar feltalálók*, p. 27.

<sup>24</sup> Hallion, *Taking Flight*, p. 97.

<sup>25</sup> Ibid.; Berg: Bődök, *Magyar feltalálók*, p. 28.

<sup>26</sup> D. Botting, *The Giant Airships* (Alexandria, Va., 1981), p. 31.

<sup>27</sup> Kennett, *First Air War*, pp. 5-7.

subscription). France had spent £48,000, while the United Kingdom allocated £5,270; just less than Austria-Hungary's £5,500.<sup>28</sup>

Some of the Dual Monarchy's aviation budget went to purchase the MAA's first airship, a Parseval-style blimp designated the Militärballoon Nr 1, or M-I.<sup>29</sup> The M-I, 49 metres long and 9 metres in diameter, could carry six people at a maximum speed of 24 nautical miles per hour (knots).<sup>30</sup> During its acceptance trials, the M-I made a seven-hour circuit from Vienna that included flight over Francis Joseph's winter palace at Schönbrunn.<sup>31</sup> The monarchy's next airship purchase, a 70-meter Lebaudy (M-II) with a semi-rigid keel, proved a disappointment and was retired after just two years. After cutting its teeth on German and French dirigibles, the MAA turned to domestic airships: first the Körting M-III, similar in size to the Lebaudy but driven by two engines and 20 per cent faster, and then the Bömches M-IV, designed by an Austrian captain and presented to the air service as a gift. Though the M-IV was smaller than its predecessors, its excessive operating costs soon drove it from active service.<sup>32</sup> As the Austro-Hungarian airship and balloon fleet grew, so did the command's conception of its possibilities, and organisational changes followed. In 1909 the MAA, at a strength of 14 officers, 28 non-commissioned officers and 150 other ranks, was transferred from the Fortress Artillery Command to the Transport

---

<sup>28</sup> 'The Great Powers and Aviation', *Flight* (24 Apr 1909), p. 232.

<<http://www.flightglobal.com/pdfarchive/view/1909/1909%20-%200230.html>> accessed 22 Nov. 12.

<sup>29</sup> Holló, *Galambtól a Griffmadárig*, p. 13.

<sup>30</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 14. One nautical mile = 1.15 statute miles = 1.85 kilometres.

<sup>31</sup> 'Austrian Military Dirigible', *Flight* (11 Dec. 1909), p. 801.

<<http://www.flightglobal.com/pdfarchive/view/1909/1909%20-%200799.html>> accessed 22 Nov. 12.

<sup>32</sup> Holló, *Galambtól a Griffmadárig*, p.14.

Troops Command, and two years later, in a move that reflected the emphasis on dirigibles, it was renamed the Airship Section (*Luftschifferabteilung*, or LA).<sup>33</sup>

If the Lebaudy and Bömches airships failed to live up to the LA's expectations, the Körting M-III exceeded them, logging more than 200 successful sorties in its first four years of flight.<sup>34</sup> Unfortunately, while on a photographic reconnaissance training mission near its base at Fischamend on 20 June 1914, the M-III collided with a Farman biplane and was completely destroyed.<sup>35</sup> According to eyewitnesses cited in a contemporary press release, the Farman, piloted by an army lieutenant and with a naval officer on board, overtook the airship and flew around it several times before brushing the top of the M-III's envelope. 'The spilling gas burst into flame, a powerful explosion, after which both aircraft crashed.' All seven men (four officers, two technicians and one engineer) on the Körting and both officers in the Farman were killed. Eyewitnesses described the airship descending slowly, wreathed in smoke, the remaining gas in the yet-unburned section of envelope restraining its fall, the crew's 'horribly frightful death screams' (*iszonytatóan rémes halálordítása*) clearly audible. Although a 1907 balloon crash in Debrecen that killed thirteen (three officers—two French, one Habsburg—and ten peasants) took a larger toll in human lives, the very dramatic death of nine men of the air service, along with the destruction of the fleet's best dirigible, made this Austria-Hungary's worst aviation accident, and hastened the end of the Empire's airship programme.<sup>36</sup> The service had already mothballed the M-IV due to its operating costs, and the realities of the tight LA budget could not be ignored. To one

---

<sup>33</sup> Ibid.; MAA name change: Grosz et al., *Austro-Hungarian Aircraft*, p. 2.

<sup>34</sup> Holló, *Galambtól a Griffmadárig*, p. 14.

<sup>35</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 15.

<sup>36</sup> Debrecen crash: *New York Times*, 'Forty-seven Lives Lost in Airship Accidents', 14 July 1910, <<http://query.nytimes.com/mem/archive-free/pdf?res+F40714FD355D16738DDDAD0994DF405D808DF1D3>> accessed 8 Nov. 12; airship programme end: Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 16.

historian of Austro-Hungarian aviation, ‘it was soon apparent that the vast expense required to house and feed these unwieldy monsters would swallow the total funds allotted to military aviation.’<sup>37</sup> In later years, the Germans would find that for the expense of a single Zeppelin they could have had thirty Albatross biplanes.<sup>38</sup> That was an opportunity cost the Habsburg air service simply could not afford. The Fischamend crash, although a human catastrophe, increased the LA’s effectiveness in the long run by removing a substantial drain on the air service’s resources, and forcing it to focus on the heavier-than-air craft that would soon surpass airships in capability.

With Otto Lilienthal’s death in an 1896 glider crash, European heavier-than-air ‘aviation had entered a steep decline nearly as precipitous as that which killed the German master.’<sup>39</sup> In Lilienthal’s homeland as well as in France, inventors turned ‘away from winged flight and towards the total embracing of lighter-than-air balloons, blimps and ultimately Zeppelins’.<sup>40</sup> For a decade, nearly all substantial advances in aeroplane flight occurred in the United States. Not until 1906, three years after the Wright brothers’ historic first flight at Kitty Hawk, did a European fly a heavier-than-air powered aircraft. Inspired by Alberto Santos-Dumont’s success (he had previously been known for his small, highly manoeuvrable airships), Europeans took a renewed interest in aeroplanes, and over the next two years narrowed the gap opened by the Americans. Nonetheless, Wilbur Wright’s 1908 aerial demonstrations in France amazed the public and silenced the doubters. Wright made a total of 113 flights without major incident, one of them lasting nearly two and half hours. American supremacy, while convincing, was fleeting: within a year of Wright’s triumphant

---

<sup>37</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 2.

<sup>38</sup> Hallion, *Taking Flight*, p. 278.

<sup>39</sup> Lilienthal, Wrights, Santos-Dumont: Hallion, *Taking Flight*, pp. 165-6, 221, 231-2.

<sup>40</sup> Kennett, *First Air War*, p. 7.

tour, Louis Blériot crossed the English Channel in a monoplane of his own design.<sup>41</sup> Perhaps more impressive than the thirty-seven-minute flight is the degree to which Blériot's craft, with its tractor engine, enclosed fuselage, identifiable tail section with rudder, and wheeled undercarriage, looks to the modern eye like a proper aeroplane.

Blériot's exploit mobilised air-minded Hungarians, and across the country they began to build aeroplanes. Some were unwilling to wait for a domestic industry to arise, and instead headed to France to learn to fly. One of those early French-trained Magyar pilots, a pharmacist named Ágoston Kutassy, returned home in his Farman biplane and in 1910 earned the first Hungarian-issued pilot's licence. Blériot himself performed three aerial demonstrations in Budapest in October 1909 that 'dazzled' spectators and left a 'tremendous influence on the crowd.'<sup>42</sup> On the former cavalry-training field at Rákosmező where Blériot held his air show there soon appeared numerous hangars. Among them could be found Dr Kutassy's Farman as well as János Adorján's home-built plane, which in January 1910 made the first flight of an aircraft designed and manufactured entirely within Hungary. Adorján's flight marks the birth of the Hungarian aircraft industry, and Rákosmező airfield earned the title 'cradle of Hungarian aviation'.<sup>43</sup> The birth may have been met with joy by most of the family, but some members clearly thought it overdue. After the incredible success of the 1909 Rheims Aviation Week (some half a million visitors), in which seven of the top eight prize winners were French (earning 137,000 francs),<sup>44</sup> one Magyar wag displayed a characteristic combination of wit and pique, as well as extensive knowledge of international aviators:

---

<sup>41</sup> Ibid.

<sup>42</sup> Blériot, Kutassy and Adorján: Holló, *Galambtól a Griffmadárig*, p. 9-10.

<sup>43</sup> Adorján: Bődök, *Magyar feltalálók*, p. 55; cradle: Holló, *Galambtól a Griffmadárig*, p. 10.

<sup>44</sup> Hallion, *Taking Flight*, p. 264.

<i>Repül a fecske, repül a gólya,</i>	The stork flies, and the swallow,
<i>Repül a franciák Blériotja.</i>	So flies the Frenchman Blériot.
<i>Repül a Paulhan, repül a Latham,</i>	Paulhan flies, and so does Latham,
<i>Warchalowszky is repül már tán.</i>	Warchalowski already can.
<i>Repül a gólya, repül a fecske,</i>	The swallow flies, and the stork
<i>A német sas, az olasz kecske,</i>	The German eagle, Italian goat.
<i>Csak a szegény magyar turul—gurul.</i> <sup>45</sup>	Only the poor Hungarian hawk—walks. <sup>46</sup>

Hungarian patriots were not alone in their dismay at the French prowess on display at Rheims. Commenting on the ‘established fact’ of the aeroplane’s possibilities, David Lloyd George, the future Prime Minister, felt ‘as a “Britisher,” rather ashamed that we are so completely out of it.’ The German attaché reported to Berlin ‘that the French have made in a relatively short time enormous progress in the field of aviation technology.’<sup>47</sup> Taken together, these three reactions reveal two important aspects of aviation in the first half of the 20th century: first, the intensely nationalist feeling that flight engendered, and second, the rapid swings of ascendancy brought on by the speed of technological innovation. Airmen were already aware of the importance of aviation as an instrument of national prestige (and had a growing appreciation for its role in defence), but often that was tempered by a sense of kinship with other fliers regardless of citizenship. Aviation boosters who were not themselves pilots tended to emphasise the importance of national competition. The pace of innovation in the early years of heavier-than-air flight exacerbated these feelings. From the Wright brothers’ flight until near the end of the Second World War, the lead in aviation technology changed hands frequently. Neither despair nor dominance lasted. In the first

<sup>45</sup> Bödök, *Magyar feltalálók*, p. 54. Paulhan (French) and Latham (English) figured prominently at the Rheims meet, and Latham attempted a Channel crossing a week before Blériot’s success.

<sup>46</sup> ‘Stork’ and ‘swallow’ (*gólya* and *fecske*) are transposed in each line, to retain in English some sense of the rhyme. Likewise, ‘hawk’ doesn’t do justice to the mythic Hungarian *turul*, which is usually rendered ‘eagle’. The *turul* played a large role in the *Honfoglalás*, the foundational story of Magyar history in which the Árpád clan occupied the Danubian Basin in the ninth century. It was the totem for Árpád’s army and remained a powerful image of Hungarian military pride. See I. Dienes, *A honfoglaló Magyarok* (Budapest, 1978), p. 55.

<sup>47</sup> Lloyd George and attaché: Hallion, *Taking Flight*, p. 265.

decade alone, leadership had swung dramatically from France to the United States and back. During the First World War, Germany, France and Britain would each have periods of unmistakable technical mastery. The rate of technological change slowed immediately after the war, but no single country achieved sustained technological superiority until the US did so in 1944.

Austria-Hungary entered its brief period of pre-war prominence just as the nameless Magyar poet was lamenting its backwardness. The source of the prominence was the widespread acclaim met by the Taube, a ‘remarkably birdlike and attractive’ monoplane designed by Igo Etrich, who began work on the craft as early as 1904 before achieving satisfactory flight control in 1910.<sup>48</sup> Etrich was an Austrian student of Friedrich Ahlborn, a German professor who had made extensive studies of the *Zanonia macrocarpa* winged seed, the influence of which was clearly visible in the shape of the Taube’s wings. More important than the Taube’s provenance was its performance, which was exemplary in all regards, as it ‘coupled gentle flying characteristics with excellent stability and safety. Well-harmonised controls, a rugged structure, and a powerful Austro-Daimler...engine assured its success.’<sup>49</sup> It could also be assembled in thirty minutes and taken apart in eight—a trait whose advantage now is hard to credit, but one that was critical in the days when the aeroplane was expected ‘to move with the Army train and reconnoitre in the manner of traditional cavalry employment.’<sup>50</sup> The LA took delivery of twenty-nine Taubes between 1911 and 1913, and the aircraft was exported to Italy, Russia, Spain, England, China, and especially Germany, where Gotha and Rumpler built them in large numbers under licence.<sup>51</sup> Both the German

---

<sup>48</sup> Hallion, *Taking Flight*, p. 279-81.

<sup>49</sup> Ibid.

<sup>50</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 2.

<sup>51</sup> Ibid.; Gotha, Rumpler: Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 21.

and Austro-Hungarian air services maintained Taubes in front-line units even in the early days of the First World War before relegating them to basic training service.<sup>52</sup> Germany had entered heavier-than-air flight late, and its initial attempts at aircraft development had been fraught with problems, which forced the government to consider both American and French machines before settling on the Austrian Taube for its earliest suitable military craft.<sup>53</sup> Thus at the very beginning of the military aviation relationship between Vienna-Budapest and Berlin, the technology transfer had gone from south to north. That would never again be the case.

Another important Austrian design went into production in the autumn of 1910. In contrast to the curvaceous single-wing Taube, the Pfeilflieger (‘arrow flier’) was an angular biplane with distinctive sweptback wings. It was designed by an Austrian army officer and graduate engineer, Hans Umlauff von Frankwell, and was built in the Vienna factory of Jacob Lohner and Co, the same firm that produced the fuselages for Etrich’s Taube. In June 1911, Umlauff won the Vienna-Budapest-Vienna racing prize in a Pfeilflieger, and secured for Lohner a LA contract. Eventually 212 Pfeilfliegers of various versions were built, including six for export to Spain. Austro-Hungarian aviators soon began setting world speed and altitude records in their Lohner Taubes and Pfeilfliegers, such that in 1912 the Dual Monarchy, with eighteen world aviation records, trailed only France (45), and was ahead of Italy (11), the US (8), Germany (5), and Britain and Belgium (1 each).<sup>54</sup> Too much could be made of this brief period in the forefront of aviation, but it does demonstrate a significant intellectual capacity for, and interest in, flight, and therefore points to material deficiencies to explain later failures and shortcomings.

---

<sup>52</sup> Morrow, *German Air Power*, p. 10.

<sup>53</sup> Hallion, *Taking Flight*, p. 279.

<sup>54</sup> Grosz et al., *Austro-Hungarian Aircraft*, pp. 11, 4.

The Luftschifferabteilung began procuring aircraft in 1909, a full year before Etrich introduced his Taube. Of the first five acquisitions, two were Farman-Voisin products, one a Wright Flyer, one a Blériot of the type demonstrated at Rákosmező, and one a domestic design by Hungarian engineer Sándor Svachulay. Three of the aeroplanes, like the Bömches M-IV airship, were gifts from wealthy citizens.<sup>55</sup> Austrian officers Miescislaus Miller and Hans Umlauff, the first two Habsburg military pilots, had taken instruction on the Farman-Voisin. The Monarchy's third army pilot (and first Magyar), Captain István Petróczy, learned to fly the Wright machine, and established the Army's first flying school two years later at Wiener-Neustadt.<sup>56</sup> Conrad von Hötzendorf, the Chief of the General Staff, became convinced of the advantages of aerial observation after a September 1910 flight with Warchalowski (becoming on that occasion perhaps the first army chief of staff of any nation to fly).<sup>57</sup> Conrad issued a staff directive the following month that called for an air force of 200 planes and 400 pilots. This force was to be distributed in pairs of aircraft to the general staff, army and corps headquarters, as well as to the forty-eight infantry regiments, while the four primary fortresses (Cracow, Przemyśl, Pola and Cattaro) would receive three planes each.<sup>58</sup> Conrad's 'clear appreciation of the importance of aviation in a future war was influential in counteracting the conservatism of the War Ministry'.<sup>59</sup> In addition to

---

<sup>55</sup> Holló, *Galambtól a Griffmadárig*, p. 14. This was not an uncommon practice at the time. Zeppelin's airship programme was rescued from financial ruin by a massive public subscription scheme, and in the UK a National Aviation Fund was established in 1912 with a goal of one million shillings to be used for aviation prizes.

<sup>56</sup> Third army pilot: Holló, *Galambtól a Griffmadárig*, p. 14; school: Grosz et al., *Austro-Hungarian Aircraft*, p. 2. Petróczy was the ninth person in Austria-Hungary to earn a pilot's licence.

<sup>57</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 17; first chief to fly: Hallion, in *Taking Flight*, p. 286, gives that distinction to Prince Chakrabongse, the Siamese chief of staff, but Conrad's flight took place three months earlier. Warchalowski also took the Grand Duke and Duchess for flights at the 1910 Budapest flight meeting, (*Flight*, 9 Jul 1910).

<sup>58</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 17.

<sup>59</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 2.

increasing the LA's funding he also initiated the domestic aeroplane competition in which the Taube made such an impression. Such full-throated support of aviation was unusual among contemporary chiefs of staff, but it should be remembered that Conrad was an avowed social Darwinist who campaigned ceaselessly for a preventive war against Serbia.<sup>60</sup> His embrace of air power might therefore have owed more to a general enthusiasm for war than to his shrewd perception of the efficacy of a new arm. Whatever his motivation, Conrad's 1910 directive was not realised. As we shall see, four years later the Dual Monarchy's army and naval forces entered the First World War with fewer than one hundred aircraft of all types.<sup>61</sup>

In France, meanwhile, the situation was very nearly reversed: even as some military intellectuals dismissed the aeroplane's potential, the army began to purchase them in large numbers. In 1910, Brigadier Ferdinand Foch, then the commandant of the French staff college and later the supreme commander of Allied forces, observed an aerial display and was not impressed: 'L'aviation pour l'armée, c'est zéro'.<sup>62</sup> Nevertheless, the French army ordered more than 200 aeroplanes in 1910-11, with plans to add 100 machines in the years 1913-14 and 600 in 1915.<sup>63</sup> British producers continued to rely on French designs for inspiration and translated French aviation documents to keep abreast of current aeronautical trends (as did Germany). The degree to which French technology dominated British thinking is demonstrated by the Royal Aircraft Factory's type designations of B.E, F.E. and S.E,

---

<sup>60</sup> H. Strachan, *The First World War, Vol. I: To Arms* (Oxford, 2001), pp. 54-5.

<sup>61</sup> Morrow, *German Air Power*, p. 167.

<sup>62</sup> Quoted in Hallion, *Taking Flight*, p. 310.

<sup>63</sup> 200 in 1910-11: J.H. Morrow, 'Defeat of the German and Austro-Hungarian Air Forces in the Great War, 1909-1918' in R. Higham and S.J. Harris (eds.), *Why Air Forces Fail: The Anatomy of Defeat* (Lexington, Ky., 2006), pp. 102; 100 and 600: Kennett, *First Air War*, p. 20.

which stand for Blériot, Farman or Santos Experimental.<sup>64</sup> Germany, whose early struggles with aeroplane design and fascination with the Zeppelin stymied domestic production, started to make up lost ground, spending twice as much as Britain on military aviation in 1911-12.<sup>65</sup> Italy established an aviation service in 1910 and appropriated 10 million liras (approx. £400,000) for its equipping. The Tsar's brother-in-law founded the Committee for Strengthening the Air Fleet and organised Russian air forces along French and German lines, with an initial outlay of 900,000 roubles (£10,000).<sup>66</sup>

Public enthusiasm for flying grew faster even than government interest. It was estimated at the end of 1910 that there were 500 licensed pilots in the world. Of those licences, the Aero Club of France had issued 345 (of which 272 were to French nationals, 27 to Russians, 19 to Britons and the remaining 36 to citizens of 18 other countries).<sup>67</sup> The Deutschen Luftschiffer Verbandes, a distant second in pilot production, had certified sixty-three pilots by that time, and the Royal Aero Club forty-seven pilots.<sup>68</sup> Austria-Hungary had eighteen certified pilots, all of whom earned their licences within the Monarchy. (Russia had more licensed pilots, but all were foreign-trained).<sup>69</sup> Two years later, nearly 2,500

---

<sup>64</sup> Hallion, *Taking Flight*, p. 272-6.

<sup>65</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 3.

<sup>66</sup> Hallion, *Taking Flight*, 280, 283. 900,000 roubles: S.W. Palmer, *The Dictatorship of the Air: Aviation Culture and the Fate of Modern Russia* (Cambridge, 2006), p. 18. The exchange rate in mid-1910 was 25 Italian liras and 94 Russian roubles to the pound sterling ('City Intelligence', *The Times*, 1 July 1910, p. 19, col 2).

<sup>67</sup> 500 pilots: 'Accidents to Flyers', *Flight* (3 Dec. 1910), p. 997, <<http://www.flightglobal.com/pdfarchive/view/1910/1910%20-%200999.html>> accessed 22 Nov. 12; '354 Aero Club de France Pilot Aviators', *Flight* (4 Feb 1910), p. 88,

<<http://www.flightglobal.com/pdfarchive/view/1911/1911%20-%200086.html>> accessed 22 Nov. 12  
<sup>68</sup> 'German Pilot Aviators', *Flight* (18 Mar. 1911), p. 230; <<http://www.flightglobal.com/pdfarchive/view/1911/1911%20-%200228.html>> accessed 22 Nov. 12  
 'Aviators' Certificates', *Flight* (7 Jan 1911), p. 11,

<<http://www.flightglobal.com/pdfarchive/view/1911/1911%20-%200011.html>> accessed 22 Nov. 12  
<sup>69</sup> 'More Continental Aviators', *Flight* (6 May 1911), p. 402; <<http://www.flightglobal.com/pdfarchive/view/1911/1911%20-%200400.html>> accessed 22 Nov 12.

certificates had been granted around the world, and although Austria-Hungary's share remained the same (91 pilots for 3.6 per cent), Russia had also maintained its position (162 pilots, 6 per cent) and Italy had grown its pilot corps from three in 1910 to 186 in 1912. The 1912 world records show a qualitative Habsburg edge over its future adversaries in both men and machines, but the large disparity in numbers of trained pilots should have alarmed the general staff in Vienna.

During this time aircraft first participated in large-scale military manoeuvres. In the September 1910 French army exercises, airships were grounded due to high winds, but aeroplanes managed to get airborne and were praised as 'indispensable to armies as the cannons and the rifles'.<sup>70</sup> British pilots flew in Indian manoeuvres in 1911 and in the United Kingdom in 1912, in each case providing important intelligence about opposing units' dispositions. The Italians followed a similar scheme in their 1911 war games, each side having five aeroplanes, with a dirigible at the disposal of the general directing the exercise.<sup>71</sup> The Austro-Hungarian Army first experienced aeroplane reconnaissance in its V Corps' 1911 autumn manoeuvres, during which both military and civilian pilots took part, flying Etrich and Pischof machines. Despite the mountainous terrain and river fog in the Pilis hills north of Budapest, the 'red' pilots were able to track the progress of 'blue' forces attacking from Komárom. Their written observations, dropped into a meadow near the red ground forces headquarters, proved crucial to the successful defence of a key Danube bridge. In the course of the exercises, the aircraft flew hundred-nautical-mile missions, and the 'blue' M-I Parseval airship stayed aloft five hours. These manoeuvres demonstrated to the military

---

'Federation Aeronautique Internationale', *Flight* (5 Apr 1913), p. 387,

<<http://www.flightglobal.com/pdfarchive/view/1913/1913%20-%200381.html>> accessed 22 Nov. 12

<sup>70</sup> French general Pierre-Auguste Roques, who soon became inspector of military aeronautics.

Quoted in Hallion, *Taking Flight*, p. 310.

<sup>71</sup> Kennett, *First Air War*, p. 17.

leaders of Austria-Hungary the significance of the aeroplane and the necessity for attending to the further development of the air arm.<sup>72</sup> Implementation was not immediate, and X and XI Corps' exercises later in the month in the vicinity of Przemysl did not include an aviation component.<sup>73</sup>

Just weeks after the conclusion of the Habsburg manoeuvres, Italy mobilised its embryonic air force for service against Ottoman forces in Libya. Nine aircraft (three Nieuport, two Taube and two Blériot monoplanes, along with two Farman biplanes), eleven pilots and thirty enlisted men formed the initial cadre; three airships and additional aircraft and pilots arrived later (including a squadron of civilian fliers).<sup>74</sup> Italian aviators 'immediately began to claim a number of "firsts" in aerial warfare': the first combat reconnaissance missions, the first bombardment from an aeroplane (a Taube), as well as the first casualties from ground fire and the first captured airman.<sup>75</sup> The Italian General Staff were well aware that these were pioneering efforts. Its own summary report of the war praised the value of aerial reconnaissance and photography, and credited bombardment with 'a wonderful moral effect', although it 'did no material damage'. 'The value of this experiment,' the report continued, 'which Italy had the fortune to effect for the first time in history, will furnish a treasure for the future.'<sup>76</sup> One officer who embraced that future was Giulio Douhet, a forty-year-old captain of artillery, who had predicted in 1909 that the air force would someday join the army and navy as an equal combatant.<sup>77</sup> In 1912 he was more

---

<sup>72</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 17-18.

<sup>73</sup> Imperial and Royal General Staff, *Die Armeemanöver in Nordungarn* (Vienna, 1912).

<sup>74</sup> J.L. Kerr III, 'Against All Comers: Operations of the K.u.K. Luftfahrtruppen', *Cross and Cockade Journal*, 15/4 (1974), p. 293.

<sup>75</sup> Kennett, *First Air War*, p.18; captured airman: Hallion, *Taking Flight*, p. 314.

<sup>76</sup> Italian General Staff, *The Italo-Turkish War (1911-12)*, trans. R. Tittoni (Kansas City, Mo., 1914), p. 100.

<sup>77</sup> Hallion, *Taking Flight*, p. 314.

emphatic: ‘A new weapon has come forth, the sky has become a new battlefield.’<sup>78</sup> The Italian leaders apparently agreed and began a rapid expansion of the air force. A national subscription raised an additional three million lira (£130,00) for aircraft purchases, and by 1914, the Battaglione Aviatori had thirteen squadrons, two flying schools and fourteen military airfields.<sup>79</sup>

Closer to the lands of the Dual Monarchy, the 1912-13 Balkan Wars provided additional, if somewhat less dramatic, examples of the utility of air power. Neither side in the conflict had a substantial air force, and most aircraft were French or German, as were many of the pilots (joined by Britons, Russians, and Americans). Due to technological constraints as well as moral scruple (the foreign pilots being in some cases unwilling to bomb), there was little offensive action or innovation. Nevertheless, the conflict gave ‘more convincing evidence that aerial reconnaissance was of great benefit in learning the enemy’s dispositions and movements.’<sup>80</sup>

The years 1911 to 1913 were a time of upheaval in the Austro-Hungarian military leadership. In September 1911, Franz von Schönauich was replaced as Minister of War by Moritz von Auffenberg, and Conrad, Chief of the General Staff since 1906, was forced out in favour of Blasius von Schemua. The proximate cause of Conrad’s fall was his attempt to instigate a preventive war with Italy while Rome was preoccupied in Libya. Dismissed on 2 December 1911, Conrad was recalled by the Emperor fifty-three weeks later.<sup>81</sup> In the midst of this turbulence, Major Emil Uzelac, an engineer serving in the transport corps, was selected for promotion to Lieutenant Colonel and appointed head of the LA. Uzelac, an

---

<sup>78</sup> Kennett, *First Air War*, p. 18.

<sup>79</sup> Kerr, ‘Against All Comers’, p. 293.

<sup>80</sup> Kennett, *First Air War*, p. 19.

<sup>81</sup> L. Sondhaus, *Franz Conrad von Hötzendorf: Architect of the Apocalypse* (Boston, 2000), pp. 104-7.

‘ideal choice to imbue the LA with substance and character’, was a bit of a character himself.<sup>82</sup> His own origins—born in Komárom to an Orthodox smallholder from Croatia—illustrate the ethnic variety of the Habsburg Empire as well as the opportunities available in its army to talented men of any extraction. Uzelac learned to fly after taking command in April 1912, earning his pilot’s certificate (the Monarchy’s 61st) in August of that year at the age of forty-five.<sup>83</sup> He became an accomplished and respected pilot and insisted on flying many of the LA’s new models himself before they reached operational units. Promoted to Colonel in 1914 and General in 1918, he led the LA until being replaced in the closing weeks of the war.<sup>84</sup> The length of his tenure as Austria-Hungary’s chief of the air service exceeded that of any other major combatants.

Although Uzelac was an energetic and capable leader, and Conrad a supportive chief of staff, Austria-Hungary’s expenditures on military aviation in the years immediately preceding the First World War were dramatically lower than that of other major European powers.<sup>85</sup> As the table shows, the population of the Dual Monarchy was 26 per cent larger

	1912	1913	1914	3-yr Total	Population	Per Million
Austria-Hungary	£13,400	£19,400	£67,700	£100,500	49.9	£2,000
Germany	£508,000	£2,011,200	£3,156,800	£5,676,000	67.0	£84,700
United Kingdom	£243,200	£551,300	£1,048,100	£1,842,600	46.4	£39,700
France	£1,359,800	£1,722,700	£1,953,500	£5,036,000	39.6	£127,200

<sup>82</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 3.

<sup>83</sup> Kerr, ‘Against All Comers’, p. 292.

<sup>84</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 3.

<sup>85</sup> Expenditures from *Die Militärluftfahrt bis zum Beginn des Weltkrieges 1914* (Berlin, 1941), quoted in Grosz et al., *Austro-Hungarian Aircraft*, p. 3. Sums were converted from 1914 US dollars using an exchange rate of 4.7 USD to 1 GBP. Population in millions of inhabitants, excluding colonies, from J. Ellis and M. Cox, *The World War I Databook: The Essential Facts and Figures for All the Combatants* (London, 2001), p. 245.

than that of France, but France spent 50 times more on military aviation than the Habsburgs (more than 60 times per person). The government in Vienna even declined to lend its support to the Austrian Air Fleet Fund, a civilian revenue-generating scheme copied from the successful German effort that raised seven million marks (£340,000) for military aviation from 1912 to 1914.<sup>86</sup> German outlays brought the two future Central Powers nations to near parity with Great Britain and France, but the enormous discrepancy between spending in Vienna and Berlin was a precursor of future wartime dependency.

The Habsburg parsimony extended well beyond aviation to all areas of the armed forces, and ‘in the years before 1914 Austria-Hungary gradually dropped behind her competitors’.<sup>87</sup> Russia, for example, had trebled its military expenditures from 1871 to 1914, while the Dual Monarchy’s spending had only doubled. ‘Romania, with a population of seven and a half millions, most of whom lived in abject poverty, provided almost as much money for her armed forces as Hungary, with a population three times as great as that of Romania, did for the Common Austro-Hungarian Army.’<sup>88</sup> The Hungarian parliament in fact refused to pass laws approving credits and increasing recruitment for the Common Army until Magyar became the language of command for regiments raised from Hungarian lands, and until the Honvéd was permitted its own artillery units. The pro-Habsburg orientation of Francis Joseph’s army is well established, and its role in holding together the fragmenting

---

<sup>86</sup> Morrow, *German Air Power*, p. 10.

<sup>87</sup> N. Stone, ‘Army and Society in the Habsburg Monarchy, 1900-1914’, *Past and Present*, 33 (Apr. 1966), p. 96.

<sup>88</sup> *Ibid.*

monarchy is not in doubt.<sup>89</sup> Among many Hungarians, however, the Army was unpopular, a ‘remnant of royal absolutism [that] contradicted the spirit of dualism and the country’s Hungarian character.’<sup>90</sup> Parliamentary opposition to the increased military budget was overcome only in June 1912, when István Tisza, then speaker of the Országgyűlés, ‘ordered the parliamentary guard to escort recalcitrant MPs from the debating chamber and got the government majority to vote through the programme’.<sup>91</sup> The new army bill would not take effect until 1915, which meant the Monarchy went to war with a force whose size was constrained by an 1889 law. In terms of raw manpower, Austria-Hungary fielded 2.3 million men in 1914, while France, with 10 million fewer inhabitants, put nearly 4 million in uniform.<sup>92</sup> Nor could Vienna hope to make up with firepower what it lacked in soldiers: ‘the Austro-Hungarian army was the most under-gunned in relation to its (already inferior) strength of any army in Europe.’<sup>93</sup> It was also the most ‘under-planed’, with only fifty-three frontline aircraft in both the army and navy.<sup>94</sup> Its ally Germany had 232 combat machines, and among the Allies, Russia had 190, France nearly 300, and Britain over 90.<sup>95</sup>

An exceptionally well-managed acquisition process would have made the most of the few koronas available for aircraft purchases, and, given the high standard of Austro-Hungarian aviation technology in 1912, might have made the numerical gap less significant than it seemed. Unfortunately for the Dual Monarchy, its aviation procurement was marred

---

<sup>89</sup> See Stone, ‘Army and Society’, I. Deák, *Beyond Nationalism: A Social and Political History of the Habsburg Officer Corps, 1848-1918* (Oxford, 1990) and G.E. Rothenberg, *The Army of Francis Joseph* (West Lafayette, Ind., 1976).

<sup>90</sup> G. Jeszenszky, ‘Hungary through World War I and the End of the Dual Monarchy’, in P.F. Sugar et al. (eds.), *A History of Hungary* (Bloomington, 1990), p. 278.

<sup>91</sup> I. Romsics, *Hungary in the Twentieth Century*, trans. Tim Wilkinson (Budapest, 1999), p. 56. The next day an enraged opposition MP tried to kill Tisza but managed only to wound himself.

<sup>92</sup> Stone, ‘Army and Society’, pp. 104, 107.

<sup>93</sup> Strachan, *To Arms*, p. 285.

<sup>94</sup> Morrow, *German Air Power*, p. 167.

<sup>95</sup> Kennett, *First Air War*, p. 21.

by mistakes and inefficiencies at nearly every turn. After the early success with the Taube and Pfeilflieger, the war ministry decided to order, at least temporarily, exclusively from Lohner. This ‘grievous lack of judgment’ put Lohner in a position of monopoly and forced smaller firms (such as Autobiplan Werke, the builder of the Pischof planes that flew well in the 1911 manoeuvres) out of business. The dwindling opportunities in Austria-Hungary also caused a minor brain drain, as many engineer graduates of Vienna’s Technische Hochschule sought work abroad.<sup>96</sup> As long as peace prevailed and the Lohner aeroplanes continued to perform well, the effects of the monopoly remained hidden. An investigation that followed the crash of a new Pfeilflieger in the spring of 1914 revealed that Lohner’s wings were under-strength, and that the LA’s entire fleet required retrofitting. Colonel Uzelac blamed complacency for Lohner’s mistake and claimed they employed ‘shoddy and primitive design practices’ when compared to German and British firms he had visited. With its air force grounded, ‘the war ministry had no choice but to reverse its policy and permit the establishment of German-owned companies in Austria-Hungary.’ Albatross and Aviatik quickly set up subsidiaries in Vienna, and Deutsche Flugzeug Werke founded the Lloyd factory outside Budapest. Austrian financier Camillo Castiglioni, a major investor in Lohner, bought Igo Etrich’s Brandenburg company, the first of many acquisitions that would eventually give him enormous power over Austro-Hungarian aircraft production.<sup>97</sup>

While Uzelac’s description of the ‘shoddy and primitive’ work on the Pfeilflieger was undoubtedly accurate at the time, it was not a fair characterisation of all Habsburg aviation handiwork, the quality of which was generally quite high.<sup>98</sup> That Austro-Hungarian aviation

---

<sup>96</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 4.

<sup>97</sup> *Ibid.* pp. 13, 4.

<sup>98</sup> *Ibid.* Lohner’s own seaplanes were finely crafted, robust and effective; UFAG’s (Ungarische Flugzeug Werke AG) quality of work was praised by the war ministry even as its organisation was

industrial policy was a marvel of inefficiency, however, is absolutely clear. Throughout the war Vienna consistently overestimated its ability to produce aircraft and underestimated the resources required to achieve its unrealistic goals. At the beginning of the war, the LA's commander had estimated that domestic industry would need to produce forty-six aircraft per month by the end of the year. Even with the new factories, only sixty-four planes were built from August to December 1914. German imports added forty-eight machines to the inventory, but still the increase did not meet the LA's need. Uzelac then raised his estimate to sixty per month, but saw deliveries decline from twenty-four to seven aircraft per month due to the introduction of new types.<sup>99</sup> Austria-Hungary's aircraft industry expanded from 218 workers in August 1914 to 5,983 in January 1917, an increase of 2,600 per cent, but demand continued to outstrip supply. After the aviation department successfully appealed to the war ministry for exemptions from service for some critical workers, it still received fewer than 60 per cent of the requirement, and many of those were not suited to their tasks. Because more woodworkers were available, they were sent to aircraft factories instead of the metal workers desperately needed. Machinists capable of precise work found themselves assigned to mass production in munitions factories even as less-skilled lathe hands laboured to build engines. 'Skilled furniture makers and carpenters passed their time in frontline companies "making ingenious war mementos to amuse themselves" while the aircraft industry had to utilise ordinary carpenters for extremely intricate work.'<sup>100</sup> Production efficiency did increase over the course of the war as a result of greater standardisation and experience, but through 1918, Austro-Hungarian firms required twice as many employees to

---

criticised, and many licensed-produced versions of German aircraft were built to higher standards than in Germany.

<sup>99</sup> Morrow, *German Air Power*, p. 167.

<sup>100</sup> *Ibid.* pp. 171-4.

build an aircraft as in German factories (thirty-nine versus nineteen).<sup>101</sup> With nearly one fifth of its population—almost all the men ages 18-53—under arms, the Dual Monarchy could ill afford this level of inefficiency, but the relative lack of mechanisation required skilled labour.<sup>102</sup>

Elements of Vienna's commercial policy exacerbated the existing problems of an underdeveloped industrial sector, increasing scarcity of natural resources, and deficiencies in labour. One of the most troubling aspects was the encouragement or tolerance of monopoly. After suffering the consequences of its decision to award an exclusive contract to Lohner in 1914, the War Ministry, by not acting to stop mergers and buy-outs, was faced in 1916 with a cartel that was largely immune to government pressure. Domestic industry's inability to supply the Luftfahrtruppen (as the LA became known in July 1915) with sufficient aircraft forced Austria-Hungary to rely on German machines. The German government was naturally concerned with its own aircraft needs and permitted only a few companies to export planes to the Monarchy, most notably Brandenburg, Fokker, Rumpler, Albatross and Aviatik (the last two of which also had licensed production factories in Austria-Hungary). Brandenburg was by far the biggest exporter, delivering more aircraft to Vienna in the war's first two years (243) than all other German firms combined.<sup>103</sup> After October 1915, it was in the hands of Camillo Castiglioni, whose involvement with Habsburg aviation dated back to 1909, when his trading company, Motor-Luftfahrzeug-Gesellschaft (MLG), brokered the LA's purchase of the M-I and -II airships. MLG later bought the Austrian patent rights for Etrich's Taube and secured global sales rights for Lohner's products. Lohner and

---

<sup>101</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 4. In many cases due to licence agreements, the aircraft would have been of the same model. In some cases (e.g. the German multi-engine G and R planes), those built in Germany would have been substantially more complicated.

<sup>102</sup> Romsics, *Hungary in the 20th Century*, p. 85.

<sup>103</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 5.

Castiglioni, along with a pair of Hungarian firms, Ganz and Manfréd Weiss, also founded UFAG (Ungarische Luftschiff und Flugmaschinen AG), the first aircraft factory in Hungary, which became the Monarchy's second largest aircraft producer. Austria-Hungary's most productive company was the local branch of Albatross, which, after its purchase by Castiglioni in early 1917, changed its name to Phönix. By March 1917, the Castiglioni conglomeration of Brandenburg, Phönix and UFAG had produced half of all the Monarchy's aircraft.<sup>104</sup> Brandenburg's importance to the LFT had already given Castiglioni leverage to 'dictate comparatively high prices to the Austro-Hungarian Army, which had no choice but to pay them,' and UFAG was able to squeeze a price increase of nearly 60 per cent from the navy.<sup>105</sup> The navy staked its hopes in 1918 on new types from the Castiglioni concerns, but after the failure of a 350-horsepower flying boat, had no new aircraft models to meet the Italian threat in the Adriatic. Meanwhile, Castiglioni further strengthened his position early that year by acquiring BMW. In the wake of a rumoured consolidation of all Habsburg aviation industry under a single head, Uzelac requested that Castiglioni, then in possession of a navy deferment, give up control of his companies and 'be immediately inducted and sent to a service post, for example, with the eastern corps in Palestine, that hinders any commercial transactions with the rear.'<sup>106</sup> Nothing of the sort occurred. The Castiglioni cartel was not fatal to the LFT; in fact its constituent firms produced some very fine products for the air service. The role of Brandenburg in keeping the Habsburg air troops aloft in 1915 cannot be denied. But the cost was high, not only in the actual prices the firms exacted from the ministry, but also in missed opportunities for promotion of other designs and developers, and in the damaging failure to deliver the navy's flying boat. The War

---

<sup>104</sup> Ibid. pp. 65, 264, 511; Holló, *Galambtól a Griffmadárig*, p. 43.

<sup>105</sup> Morrow, *German Air Power*, pp. 169, 173.

<sup>106</sup> Ibid. p. 179; Grosz et al., *Austro-Hungarian Aircraft*, p. 66.

Ministry awoke too late to the dangers of centralised ownership, and then directed an emotional and ineffective personal attack on Castiglioni.

Each of the major combatants approached the problem of aircraft production differently. France, befitting its position as the world's major aviation power, encouraged creativity among its designers and, as a result, had the greatest diversity of types. That approach sacrificed efficiency but gained ability to hedge against obsolescence. French engines—rotary, radial and in-line—powered the Allies. Britain favoured fewer designs and standardised production centred at Farnborough, an approach nearly the opposite of the French, but one that suited a relative latecomer with enormous experience in mass production. Germany also limited production types but did not insist on interchangeability between private companies and therefore did not reap the full benefits of standardisation.<sup>107</sup> Austria-Hungary, after early attempts to choose single types for production proved problematic, was obliged to accept whatever designs could be manufactured and delivered in quantity, however insufficient.

Austria-Hungary's limited industrial base and small air service fleet magnified any acquisition errors, because it did not possess the requisite reserves in either capacity or inventory to cushion falls. After Italy entered the war in 1915, LFT requirements spiked. At the same time, the rugged conditions on the Italian front exposed the inadequacies of earlier domestic designs, and forced the Monarchy to rely on Brandenburg imports. In an effort to direct and improve Austro-Hungarian production, the LFT placed orders for an untested biplane designed by Professor Knoller of the Vienna Technical University. Four domestic factories, Lohner, Aviatik, Phönix and WKF (Wiener Karosserie und Flugzeugfabrik), were directed to build the Knoller craft. 'Hamstrung from the start by a conflicting chain of

---

<sup>107</sup> Morrow, *German Air Power*, p. 12.

command, diffused responsibility, and inept engineering, the Knoller programme became a major scandal and a vituperative political affair.<sup>108</sup> One hundred eighty-four aircraft were produced in the fiasco, few of which ever flew, at a tremendous cost in money, time and diversion of resources. The incident tarnished Knoller's reputation and made it difficult for his university research centre to gather, analyse and distribute technical reports.

The dynamics of a small fleet also made anticipating obsolescence and preparing aircraft replacements more critical and difficult. Existing contracts on operational aircraft would sometimes be cancelled to make way for more advanced designs, which often failed to meet expectations. By the time production had been resumed on the proven craft, its technology was even farther behind.<sup>109</sup> This phenomenon was by no means restricted to Austria-Hungary, but without the depth of German production, the variety of France or the standardisation of Britain, it was far more damaging to its aviators. An anonymous letter to the war minister in 1916 illustrated the destructive effects of these reactive procurement policies coupled with excessive fear of enemy bombers:

The initial, mostly accurate reports concerning the superior qualities of enemy bombers were accepted as fact with no attempt at verification. This led to a precipitous rush to issue production orders—generally incapable of being fulfilled—to the detriment of normal supply. Priority contracts, at unreasonably high cost, were awarded to many factories. The capture of a Caproni had a sobering effect: further development was neglected and interest waned. The bombers, rushed to completion are now stored at Aspern (Brandenburg, Lloyd) or lie incomplete at factories (Aviatik, Lohner, Öffag and Phönix). No one of authority cares a whit about them. Frontline requests are passed off with excuses. Not a single test has been performed to finally bring the bombers to the Front.<sup>110</sup>

---

<sup>108</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 5.

<sup>109</sup> Morrow, *German Air Power*, pp. 176, 180.

<sup>110</sup> Grosz et al., *Austro-Hungarian Aircraft*, pp. 6-7.

The bombers in question never reached full operational capability, although Gotha did supply thirty-nine twin-engined G.-IVs for bombing missions in 1918.<sup>111</sup>

The final production tallies show that Austria-Hungary's aircraft industry fell far short of those of the other major European combatants. The incredible disparity manifested in pre-war expenditures was reduced, but not nearly enough. Austro-Hungarian firms built 5,181 aeroplanes during the war, while Germany produced roughly 46,000. Great Britain led the Allies with 54,000 airframes, France made 52,000 (but over twice the number of engines as Britain), and Italy contributed an additional 12,000 machines. Using the population figures cited above, Austria-Hungary produced 101 aircraft per million people; Germany 676 per million. Italy constructed 3.5 times as many planes per capita as the Dual Monarchy, and British and French fabrication rates were approximately twelve times that of Austria-Hungary.<sup>112</sup> Habsburg production of other weapons also trailed the other major powers, but by a smaller margin than its aircraft production. For instance, Austro-Hungarian firms (primarily Škoda) made 225 artillery pieces per million people, while Italy produced 338 per million (only 50 per cent more, or 1/7th the disparity in aircraft production). British and French munitions plants created only twice as many cannon per capita as did Austria-Hungary (1/6th the difference in aeroplanes).<sup>113</sup> One could conclude from this disparity that the Habsburg general staff was more resistant to innovation and failed to embrace air power, but Conrad's 1910 expansion of the LA and the appointment and subsequent support of the able Uzelac suggest otherwise. A more plausible explanation can be found in the relative

---

<sup>111</sup> Ibid. p. 448.

<sup>112</sup> Austria-Hungary's figure of 5,181 from total acceptance tables in Grosz et al., *Austro-Hungarian Aircraft*, p. 511. Nagyvárad, Szabó and Winkler give a total production number of 5,431 (p 38). The other combatants' numbers and Italian population figures are from Ellis and Cox, *WWI Databook*, pp. 245, 287. Ellis and Cox put A-H production at 4,338. Russian numbers are incomplete, and the US entered the war too late for valid comparison.

<sup>113</sup> Ellis and Cox, *WWI Databook*, p. 287.

complexity and novelty of the weapons: artillery, although a critical component of modern warfare, was considerably less complicated to design and produce than aircraft, was a more stable technology, and the Empire had a long history of manufacturing its own guns. Aeroplanes, on the other hand, were new, technologically volatile, and required nimble manufacturing processes to avoid obsolescence.

If Austro-Hungarian aircraft manufacturing and procurement were far behind the other combatants, the organisation of its air service was on lines very similar to leading European powers. The French escadrille was the archetype, 'built around six aircraft and their crews, a force that pre-war manoeuvres had seemed to indicate was adequate to supply the reconnaissance needs of an army corps'.<sup>114</sup> German Feldflieger Abteilungen conformed to the French model, while the British doubled the number of aircraft in their squadrons because of a lack of experienced officers for command. Uzelac also settled on six aeroplanes (plus two in reserve) as the number for his Fliegerkompagnien (Fliks), when in July 1914 the LA 'converted the pre-war, static Flugparks into mobile combat units'.<sup>115</sup> Within the first three months of the war, fifteen Fliks had been created.<sup>116</sup> The six-aircraft Flik remained the basic combat unit for the entire war, but units became increasingly specialised as airpower matured. After the first fifty Fliks were activated as reconnaissance units, Flik 51 began its service in summer 1917 as a fighter unit. Bomber Fliks soon followed, and the LFT's reorganisation in mid-1918 distinguished seven types of Fliegerkompagnien: D-Fliks, general purpose units that reported to army divisions; F-Fliks, for long-range reconnaissance; G-Fliks, equipped with multi-engined bombers (*Grossflugzeug*); J-Fliks, the fighter (*Jagd*) units; K-Fliks, for corps-level reconnaissance (of which few were formed); P-

---

<sup>114</sup> Kennett, *First Air War*, p. 85.

<sup>115</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 541.

<sup>116</sup> *Ibid.*, and Kerr, 'Against All Comers', p. 295.

Fliks, for photo reconnaissance; and Rb-Fliks, equipped with automatic cameras for strip photography (*Reihenbild*).<sup>117</sup> This reorganisation amounted to an intellectual recognition of the distinct forms of airpower, but came too late to have any real effect. Even in August 1918, the overwhelming majority (fifty-one) of Fliegerkompagnien were D-Fliks; ten were F-Fliks, thirteen J-Fliks and five G-Fliks.<sup>118</sup> By war's end however, all of the D-Fliks had been converted into specialised companies (some had become Schlacht-Fliks executing rudimentary close air support). Reconnaissance remained the LFT's primary mission, with thirty-eight of the final seventy-seven Fliks devoted to corps, photo, or long-range reconnaissance.<sup>119</sup>

In this development, the Habsburg air service followed, albeit a few steps behind, the trend in the other combatants' air forces. In 1914, all operational military aircraft were devoted to reconnaissance. By the summer of 1915, 10 per cent of the planes were fighters. The next year the percentage of reconnaissance craft had fallen to fifty-one, fighters had climbed to 42 per cent, and bombers accounted for the rest. In 1917, the proportion of reconnaissance units remained constant, while fighters dropped to 30 per cent, with bombers and 'battle planes' devoted to ground support, each making up approximately 10 per cent of the forces. The war's final year saw a slight decrease in the number of reconnaissance craft and a commensurate rise in fighters, but no significant change in bombers or strike planes.<sup>120</sup>

When Austria-Hungary began mobilising in July 1914, aviation units were first sent to the Serbian front, although the Russian front eventually received the preponderance of forces. Two Fliks had departed from Austria for the south, and two were activated near the

---

<sup>117</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 541.

<sup>118</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 34.

<sup>119</sup> Ellis and Cox, *WWI Databook*, p. 253. The final LFT order of battle: 20 J-, 18 P-, 17 K-, 14 S-, 5 G-, 2 Rb-, and 1 F-Flik.

<sup>120</sup> Holló, *Galambtól a Griffmadárig*, pp. 23-4.

front itself (at Mostar and Ujvidék) before any LA units headed east. As a result of Conrad's strategic indecision, Fliks 1 and 5 were redirected to the Russian front within days; in the case of Flik 1, without having flown a single operational sortie in the south. Flik 7, the first on the Russian front, was activated at Cracow on 6 August 1914. It was eventually joined by nine others, so that at the end of 1914 there were ten Fliks serving in the east, and four in the Balkans.<sup>121</sup>

It appears that LA aerial reconnaissance did not play a significant role in the early fighting against Serbia, but there were a few examples of successful air attacks. Habsburg aviators (it is unclear if they were LA or Seefliegerkorps aircraft) struck one of the war's first offensive aerial blows on 15 August 1914 against Montenegrin gun emplacements at Lovcen, a 1750-metre-high mountain overlooking the naval base at Cattaro.<sup>122</sup> No damage to the guns was recorded (they were eventually destroyed by naval gunfire), but the attempt shows an understanding of the potential of aerial bombardment and a spirit of innovation among Austro-Hungarian fliers. The Lovcen attacks were conducted with primitive bombs that had match-lit fuses, and one Austrian plane was nearly destroyed when the pilot dropped the bomb after lighting it and saw it roll under his seat. He was able to retrieve it and toss it overboard, where 'it burst only a few hundred feet below him.'<sup>123</sup> The pilot, Lieutenant Adolf Heyrowsky of Flik 2, was undeterred by this mishap. In September, he and his observer, flying in a German-built Aviatik B-1, destroyed a pontoon bridge at Kupinovo, 'thereby cutting off a few thousand Serbian troops who were taken prisoner.'<sup>124</sup> The Serbian campaign showed that the rigours of active operational flying were too much for the aged

---

<sup>121</sup> Grosz et al., *Austro-Hungarian Aircraft*, p. 542. On Conrad and mobilisation, see Strachan, *To Arms*, pp. 281-96.

<sup>122</sup> Csonkaréti and Sárhidai, *Osztrák-Magyar tengerészeti repülői*, p. 26.

<sup>123</sup> Kerr, 'Against All Comers', p. 295.

<sup>124</sup> Grosz et al., *Austro-Hungarian Aircraft*, pp. 388, 536.

Taubes, and they were quickly removed from frontline service.<sup>125</sup> In the war's second year, observation crew performance improved, and their value to the army commanders increased. Aerial reconnaissance missions around Belgrade provided detailed sketches of Serb artillery positions, which enabled accurate counter-battery fire and contributed to the successful siege of the capital.<sup>126</sup>

The impact of aerial reconnaissance was mixed on the Russian front as well. There were, to be sure, instances of individual bravery and initiative. Fliers from Fliks 5 and 11 flew at extremely low altitudes in order to draw Russian fire that would reveal enemy positions and strength.<sup>127</sup> Unfortunately for Conrad and his army commanders, and in spite of such efforts by some Habsburg airmen, the LA failed to account for all the Russian forces in Galicia (the Austro-Hungarian cavalry fared no better). In late August 1914, Conrad's initial plan for a cautious movement to the Vistula had become instead an attempt at an envelopment of the Tsar's forces in Poland. His staff estimated fairly accurately the size of the Russian armies—about fifty divisions—but could not pin down their locations. A concentration to the north around Brest-Litovsk would make Conrad's pincer movement viable, so he trusted information that confirmed this wish. And when 'aerial reconnaissance reported that there were no major Russian formations on the roads between the line Proskurov-Tarnopol to the north and the River Dniester to the south,' Conrad's course was set.<sup>128</sup> Undetected, however, were the Russian Third and Eighth Armies, 'advancing from the east, marching by night but protected by the woods from overhead observation by

---

<sup>125</sup> Holló, *Galambtól a Griffmadárig*, p. 22.

<sup>126</sup> V. Nagy, 'A 3. Hadsereg átkelés a Dunán és Belgrád elfoglalása 1915 október 6-10', *HK* 3/1926, pp. 314-5.

<sup>127</sup> Kerr, 'Against All Comers', p. 295.

<sup>128</sup> Strachan, *To Arms*, p. 348.

day.’<sup>129</sup> Those armies proved critical to blunting the Austro-Hungarian offensive in Galicia, and later formed part of the Russian force that besieged Przemysl.

That the LA was not able to find the Tsarist armies should not necessarily be attributed to incompetence. The Russians had learned the importance of concealment from aerial observation in the first days of the war, German aircraft having begun reconnaissance flights over Russia as early as 2 August. Movement at night and exploitation of overhead cover were the first of many tactics employed by land forces to negate aerial observation. Those countermeasures notwithstanding, German airmen were able to follow the progress of the Russian First and Second Armies, while their own aircraft were kept in reserve. Even when Russian planes were aloft, the commanders rarely trusted their observations. This decided advantage in aerial reconnaissance certainly contributed to the tremendous German victory at Tannenberg. At this time, the Central Powers’ air services were organised, trained and equipped in nearly identical manner. But the Russians’ rapid adoption of deception tactics made for a significant difference in the effectiveness of German and Austro-Hungarian air power in the first battles in the east. The German experience resulted in the high command’s fervent embrace of aerial observation, and led Hindenburg to declare, ‘Ohne Flieger kein Tannenberg!’<sup>130</sup> Conrad spread blame for the Austro-Hungarian defeat liberally (his allies, his staff, his intelligence services), so the LA did not suffer in relation to the other arms, but neither was it able to capitalise on the promise showed by aerial reconnaissance in the pre-war manoeuvres.<sup>131</sup>

The Luftabteilung did deliver in other trying circumstances on the Russian front. In a development that called to mind 1871 Paris and presaged the airmail boom of the 1920s, the

---

<sup>129</sup> Ibid. p. 349.

<sup>130</sup> Hallion, *Taking Flight*, pp. 340-1.

<sup>131</sup> Conrad: Strachan, *To Arms*, p. 348.

planes of Fliks 11 and 14 made fourteen mail-carrying flights from Przemysl in the course of its four-month siege (balloons from the Festungballonabteilung were also used, as were homemade balloons). All but one successfully reached Austro-Hungarian lines.<sup>132</sup> The postcards carried on these flights were undoubtedly a boost to morale, but the flights also transported military dispatches. This liaison function was especially critical since all ground communication with the fortress had been severed since early November, and the defenders relied on wireless telegraphy for contact with higher headquarters. Allied press agencies noted this use of airpower, although they overestimated the frequency of the flights. The *Daily Telegraph* reported that ‘communication between the fortress and the Austrian lines seems to have been maintained almost daily by means of aviators, who kept up a regular post, taking out letters and bringing back as much stores as their machines could carry.’<sup>133</sup> In fact, the flights averaged only one per ten days of the siege. When Przemysl fell to Russian forces on 22 March 1915, over 130,000 Austro-Hungarians surrendered, including elements of Flik 11.<sup>134</sup> A contemporary Hungarian magazine included the number of cannon lost (‘1050 of all calibres, for the most part completely obsolete, 1865 and 1875 patterns, which in any case were blown up’), but did not mention captured aircraft.<sup>135</sup> Presumably the Fliks destroyed their aircraft before they fell into Russian hands.

The air war on the Eastern Front progressed at a much slower pace than in the west. In the east, the forces committed were smaller, they were dispersed over a wider area, and technological improvements tended to originate in the west. The lower density of forces

---

<sup>132</sup> J. W. Kupiec-Weglinski, ‘The Siege of Przemysl, 1914-1915’, *American Philatelist*, Jun 2012, pp. 544-555, <[http://stamps.org/userfiles/file/AP/feature/Feature\\_06\\_12.pdf](http://stamps.org/userfiles/file/AP/feature/Feature_06_12.pdf)> accessed 31 Jan. 13.

<sup>133</sup> Quoted in *Flight* (26 March 1915), p. 298,

<<http://www.flightglobal.com/pdfarchive/view/1915/1915%20-%200218.html>> accessed 31 Jan. 13.

<sup>134</sup> Kupiec-Weglinski, ‘Siege of Przemysl’, p. 545.

<sup>135</sup> ‘Przemysl leltára’, *Huszadik Század*, Apr. 1915,

<<http://www.huszadikszazad.hu/1915-aprilis/politika/przemysl-leltara>> accessed 31 Jan. 13.

meant that aerial combat occurred much less frequently in the east. Thus the Luftstreitkräfte, the only air service to field major forces on both fronts, sustained only 189 of its 3,128 total aircraft losses in the east, and counted just 358 Eastern Front kills among the 7,425 credited to its fighter pilots.<sup>136</sup> Since air-to-air engagements largely drove the air services' requirements for higher performance aircraft, the relative lack of these engagements contributed to the slower rate of innovation. Obsolescence came slower in the east, and older aircraft remained viable weapons long after they had been abandoned in the west. This did not mean that flying was easier on the Eastern Front. The larger area and more dispersed formations required airmen routinely to operate farther away from their aerodromes, which placed a premium on both navigation skills and mechanical reliability. 'A French pilot who flew with the Russians in the Carpathians said that he reacted with "intense stupefaction" when he discovered that his airfield was 80 kilometres from the front lines. Each mission thus entailed a flight of 200 kilometres "in a glacial cold" unknown in France.'<sup>137</sup> Just as the Habsburg aviators were settling into difficult but somewhat stable air wars in Russia and the Balkans, Italy joined the war against the Central Powers. Aerial combat over the Dolomites promised to be a combination of fighting on the eastern and western fronts: environmental conditions equal to the worst previously encountered—rugged mountains, harsh weather, airfields too few and too small—as well as the prospect of up-to-date Allied fighters.

Italy fielded in May 1915 a Corpo Aeronautica Militare of 169 aircraft (including 19 seaplanes of the naval section), primarily pre-war French designs. That put Italy, entering a one-front war, at rough numerical parity with the Dual Monarchy, whose 'air service

---

<sup>136</sup> Kennett, *First Air War*, pp. 175, 179.

<sup>137</sup> *Ibid.* p. 178.

consequently faced opposition on three fronts with a production base inadequate for one.<sup>138</sup> Austria-Hungary's domestic production and German imports made good on operational losses, but were not sufficient for creating new Fliks for the Italian front. The first unit active in the southwest was Flik 8, pulled from Galicia on 13 May 1915 and sent to defend the naval base at Pola in anticipation of hostilities in the Adriatic. Other Fliks moved from the Serbian front (2 and 4) or were converted from training companies (Flik 12).<sup>139</sup> By the end of 1915 the Luftfahrtruppen had seven Fliks serving in operations against Italy, three against Serbia, and eight against Russia.<sup>140</sup>

Operations on the Italian front began, as in the east, as observation missions, and eventually grew to encompass the entire range of air warfare: offensive and defensive fighter sweeps, air interdiction, close air support, and strategic bombing. Austro-Hungarian airmen had conducted small-scale aerial attacks intermittently since the Lovcen raid in the war's earliest days, but had not yet attempted long-range, multi-ship attacks, lacking both rationale and equipment. By mid-1915, the Italians had both. Giulio Douhet, the Italian officer who was an early air power proponent, had been promoted to colonel and was convinced that aerial bombardment offered a path to victory that would avoid the human wastage he was witnessing in the bitter Alpine warfare. Through his interest in aviation he had come to know Giovanni Caproni, a young aeroplane designer. Caproni had begun work in 1910 on large cargo aircraft, and his Ca-31 was Italy's first multi-engined plane. With the advent of the war, he turned his hand to building bomber aircraft, and his aircraft equipped the Italian air service's first bomber squadron.<sup>141</sup> On 20 August 1915, the CAM launched its first raids

---

<sup>138</sup> Morrow, *German Air Power*, p. 170.

<sup>139</sup> Grosz et al., *Austro-Hungarian Aircraft*, pp. 542-3.

<sup>140</sup> Ellis and Cox, *WWI Databook*, p. 253.

<sup>141</sup> Kennett, *First Air War*, p. 46.

against Austria-Hungary. Many more were to follow. The Douhet-Caproni partnership would be responsible for the increasingly powerful three-engine bombers that attacked targets in Austria-Hungary in formations of up to thirty-six machines.<sup>142</sup> Italian forces with their superior aeroplanes bombed Habsburg cities on 254 occasions, while the LFT, flying less capable aircraft but aided by the geographical proximity of Italian cities to the front, managed 503 raids.<sup>143</sup>

Uzelac's LFT struck back, commencing a series of regular raids against port facilities in Venice. A viable multi-engined bomber was not available to the LFT until Gotha G-IVs arrived from Germany in 1918, so Austro-Hungarian bombing missions were generally conducted by the versatile two-seat B- or C-type reconnaissance planes. These single-engine craft ranged as far as the west coast of Italy, striking Spezia, Genoa, and most dramatically, Milan. On 14 February 1916, a force of ten Lohner and Lloyds from Fliks 7, 16 and 17 launched from airfields around Trento for the 240-mile flight over the mountains and Lombard plain. In spite of Italian anti-aircraft artillery and attempts at fighter interception, all the LFT planes dropped their 70-kilogram bomb loads and returned safely to their bases.<sup>144</sup> This attack, fifteen months before the first raid on Britain by German aeroplanes, may have been the first strategic bombardment carried out by heavier-than-air craft.<sup>145</sup> One of the observer/bombardiers, a Magyar lieutenant from Transylvania, recounted the raid for *Csiki Lapok*, a local newspaper. During the approach to the city, a sudden change in the wind ruined his aim and forced the flight to turn around for another attempt at bomb release:

---

<sup>142</sup> Hallion, *Taking Flight*, p. 359.

<sup>143</sup> Z. Czirók, 'Az első légi háború Magyarország felett - 1919', *HK*, 2/2011, p. 335.

<sup>144</sup> Kerr, 'Against All Comers', p. 306-8. The strike force composition is given as 12 Lohner B-VIIs in Holló, *Galambtól a Griffmadárig*, p. 25.

<sup>145</sup> A.D. Harvey, 'Bombing and the Air War on the Italian Front, 1915-1918', *Air Power History* (Fall 2000), p. 37.

‘Once more here is the target. I wave: a little left, a little back to the right; I aim—now! Away with all five [bombs]. One spot is already covered in smoke. Something burns. I see four explosions from mine. They are in a good place.’<sup>146</sup> A *Daily Telegraph* reporter described the reaction of the Milanese to their first aerial attack:

Firemen galloped through the town warning the inhabitants, most of whom, however, even after the anti-aircraft guns had begun sending shells into the sky, failed to realise the danger. The appearance of a number of Italian aeroplanes, which were gradually circling to the height of the assailants, gave the impression to the vast majority of the spectators in the streets that only aerial defence practice was in progress. Soon, however, the bombs dropped by the Austrian machines...revealed the real nature of their attack, but this hardly prevented the crowds satisfying their curiosity and standing in the streets and public squares to watch the progress of the aerial battle, which at a certain moment was of thrilling intensity.<sup>147</sup>

Twelve people, including two children, were killed in the attack. There was no damage reported to military installations, nor was there widespread panic among the population. The CAM retaliated four days later with a raid on Ljubljana by seven Capronis, one of which was seriously damaged by a LFT fighter.<sup>148</sup> Subsequent Austro-Hungarian bombing missions had some tactical success (one raid sank a British submarine in port at Venice), but most of the damage was to non-combatants, including ninety-three killed in a casemate in Padua—‘the worst incident involving civilians taking shelter from an air raid during the entire course of the First World War’.<sup>149</sup>

After months of reciprocal city bombing (more than 400 Italians died in Austro-Hungarian air raids on towns), the new Habsburg Emperor Charles I prohibited bombardment that could endanger civilians or cultural landmarks.<sup>150</sup> Italian authorities did

---

<sup>146</sup> Quoted in Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 95.

<sup>147</sup> Quoted in ‘Aircraft and the War’, *Flight* (17 Feb. 1916), p. 144.

<<http://www.flightglobal.com/pdfarchive/view/1916/1916%20-%200144.html>> accessed 2 Feb 13.

<sup>148</sup> Kerr, ‘Against All Comers’, p. 309.

<sup>149</sup> Harvey, ‘Bombing on the Italian Front’, p. 38.

<sup>150</sup> 400 killed: *ibid.*; Charles’ restriction: Rothenberg, ‘Military Aviation’, p. 81.

not extend the same consideration to Austrian landmarks, but they were concerned about civilian casualties—as long as the civilians were ethnic kin. ‘The *Italianità* of Venezia Giulia, Istria, Dalmazia and the Trentino prevented us from making the cities our targets and limited the objectives to those of strictly military nature,’ in the words of one Italian general.<sup>151</sup> Despite this restraint, the CAM bombed Trieste, Ljubljana and Innsbruck. To defend against increasing Italian attacks on lines of communication, the Monarchy fielded anti-aircraft artillery (AAA) and a rudimentary air raid warning system that also covered major cities far behind the front.<sup>152</sup>

The shortcomings of the early-warning system were made evident on 9 August 1918, when an air defence supervisor in the Graz district took more than two hours to inform his superiors of a squadron heading northeast. Defensive pursuit planes took off from Wiener-Neustadt too late to intercept the intruders: Italy’s 87th Squadron was already bombarding Vienna with half a million propaganda leaflets. This raid was the brainchild of Gabriele D’Annunzio, a ‘legendary poet-adventurer’ who flew on the mission in a two-seater and personally composed one of the propaganda messages.<sup>153</sup> The mission over Vienna ‘electrified the world’, but it was only the most audacious element of a robust Italian airborne propaganda campaign against Austria-Hungary.<sup>154</sup> In July 1918, the Habsburg Tenth Army reported that ‘plane propaganda has become even more intensive than earlier. Almost every day planes appear and shower not only the front but also the rear areas with a host of leaflets.’ By September, the CAM was dropping 90,000 leaflets per day on Austro-Hungarian formations. The LFT initially resisted participation in propaganda flights due to

---

<sup>151</sup> Kennett, *First Air War*, p. 56.

<sup>152</sup> Rothenberg, ‘Military Aviation’, p. 82.

<sup>153</sup> M. Cornwall, *The Undermining of Austria-Hungary: The Battle for Hearts and Minds* (London, 2000), p. 370.

<sup>154</sup> J.R. Woodhouse, *Gabriele D’Annunzio: Defiant Archangel* (Oxford 1998), p. 310.

fear that captured pilots would be executed, but it was Allied air superiority that ultimately prohibited effective Austro-Hungarian aerial propaganda.<sup>155</sup>

Deep penetrations of the enemy's homeland were spectacular feats and were therefore the focus of many news accounts of the time. Perhaps even more fascinating to the warring publics were the fighter aces who joined in individual combat above the clouds and died gloriously and young. The Dual Monarchy was no less susceptible to this romanticisation of dog fighting than any other European nation. The LFT produced its own aces: fourteen pilots were credited with the required ten victories; another thirty-five scored five or more kills, the number that made one an ace in the French and American air services.<sup>156</sup>

Measured in weight of effort, however, most of Austria-Hungary's air power was used in direct support of the ground forces. Even the fighter and bomber units flew most of their missions near the front, either as escort for reconnaissance or doing battlefield interdiction. The LFT flew over 700 sorties during the tenth Battle of Isonzo (May 1917), only 210 of which involved encounters with Italian aeroplanes. For Caporetto (twelfth Isonzo), Uzelac was able to mass air power for the first time. His 150 Austro-Hungarian aircraft were joined by 90 German planes. He sent them 'in formations of up to fifty machines, attacking Italian positions, lines of communications and reinforcements, and harried the retreating enemy to the Piave.'<sup>157</sup> Attrition through the winter of 1917-18 outpaced production, however, and for the June Piave offensive, Uzelac could only scrape together 170 planes including the German contribution. These airmen faced a deep Italian force augmented by British, French and American pilots, and the Allies took control of the air. LFT losses increased dramatically. Only ten Habsburg planes and crews had been shot down in the first two

---

<sup>155</sup> Cornwall, *Undermining Austria-Hungary*, pp. 372, 85-6.

<sup>156</sup> C. Chant, *Austro-Hungarian Aces of World War I* (Oxford, 2002), p. 90.

<sup>157</sup> Rothenberg, 'Military Aviation', p. 82.

weeks of June, but on the opening day of the summer offensive, they lost twenty-one aircraft. July brought no relief, with thirty-two LFT planes confirmed destroyed.<sup>158</sup> Allied aircraft attacked Austro-Hungarian lines with increasing impunity, the superiority of design evident to those watching from below. One Bosnian battalion commander, blessed with insight many airmen lack, observed, ‘In aviation, too, morale is very important, but technology is even more so.’<sup>159</sup>

By September, the LFT could no longer muster large formations, and on 24 October, it made its last major contribution to the Dual Monarchy, attacking Allied columns advancing toward the Piave.<sup>160</sup> This last effort, against an Allied army fifty-five divisions strong, came one week after Charles I had declared the establishment of federalism within Austria, and one week before he released his officers to serve in the newly-created national armies. Thus the Luftfahrtruppen, like the Austro-Hungarian army itself, ‘outlived the empire and dynasty it had been meant to defend.’<sup>161</sup>

But how well did it serve the empire? And what legacy did the LFT leave to the Hungarian national air service that followed it?

That Austria-Hungary’s grand strategy failed is indisputable. Francis Joseph and his ministers fundamentally misunderstood the nature of modern warfare, and in particular its dependence on mass production of arms and materiel. They were certainly not alone in this error, but the combination of late national industrialisation and decades of economising on military spending left the Habsburg armed forces at a disadvantage that they could not overcome. This problem was especially acute in military aviation, where the situation called

---

<sup>158</sup> Kerr, ‘Against All Comers’, pp. 343-5.

<sup>159</sup> Quoted in M. Thompson, *The White War: Life and Death on the Italian Front, 1915-1919* (New York, 2008), p. 345.

<sup>160</sup> Rothenberg, ‘Military Aviation’, p. 82.

<sup>161</sup> Rothenberg, *Army of Francis Joseph*, pp. 217, 221.

for strong leadership from the war ministry or strong support from war ministry coffers for innovative manufacturers. A directed war economy or a truly free-market economy would have served the Dual Monarchy best, but it arranged itself instead as near-monopoly with indecisive ministerial guidance and little financial incentive to producers. This was the worst possible, but most predictable, approach to aircraft acquisition, and it did nothing to mitigate Austria-Hungary's structural weaknesses.

At the operational level and below, however, the LFT was an effective fighting force. After the early reconnaissance mistakes in Galicia, Habsburg airmen provided solid intelligence, liaison, attack and aerial defence to the Imperial army and navy. The air services adapted well to improvements in aircraft technology, even when those improvements came to them later than to their opponents, and they recognised that increased specialisation of air power required reorganisation for maximum effect. First World War air-to-air victory claims are unreliable as a sole means of measuring air services' effectiveness due to irregularities in national rules and problems of confirmation, but loss rates and unit histories confirm that the LFT gave as good as it got. Its pilots were not easy prey for Allied fighters, even when outnumbered and outgunned. That reflects well on the quality of LFT pilot training and leadership from the Fliks up to General Uzelac.

The national Hungarian air force that grew out of the LFT therefore had a mixed inheritance: some tactical and even operational success, but ultimately strategic failure. The men who would build and lead the flying corps had experienced aerial combat, and in some cases had excelled at it. Yet the Habsburg air service had struggled from a lack of domestic industrial capacity that forced excessive reliance on a demanding ally, and had proved

unable to avert a disastrous national defeat. Could a national Hungarian air service, formed in secret following its prohibition by the Great War victors, avoid the same fate?

## Chapter 2

### Upheaval: 1918-19

Hungary experienced tremendous turmoil in the months that followed the end of the First World War. The disruptions were pervasive and profound: no element of public life was left untouched. Military defeat led to the dissolution of the Habsburg Empire and was followed by successive revolutions and the eventual re-imposition of a monarchy, albeit without a monarch. Entente forces initially held border regions under armistice terms, but eventually the armies of their allied successor states invaded and seized territory that had for centuries been united under the crown of St Stephen. Budapest itself was occupied. Hungary's populace, having persevered through four years of war, was rewarded with expanded suffrage and some land reform, but continued to face severe material shortages and hardship. Hungarians also suffered the consequences of fighting in their own towns and villages, something they had largely avoided in the war just ended, and they were subjected to the ravages of both Red and White terrors.

Against this backdrop of turbulence and radicalism, Hungarian airmen of the recently disbanded Luftfahrtruppen established a national flying corps that emphasised continuity in personnel, organisation, and operations. The alacrity with which the air force began operations in unfavourable conditions reveals the professionalism of those early Hungarian airmen, and the loyalty of their service under five governments in the course of a year suggests patriotism as a motivation.<sup>1</sup> With the parlous state of the domestic Hungarian

---

<sup>1</sup> A few words about 'patriotism' and 'professionalism': I do not use these terms to express approval (that is, as synonyms for 'good') but rather because the evidence shows that the overwhelming majority of airmen served Hungary regardless of the government's ideological orientation, and that they exhibited the traits of a professional armed force. Samuel Huntington, for example, listed expertise, responsibility and corporateness as professional hallmarks in *The Soldier and the State*

aircraft industry, the continued shortages of raw materials, and the disruptions to production caused by political crises, it is no surprise that the flying corps was not the decisive arm in the battles of 1919. The air service did, however, make important contributions to the state's political and military security by performing a range of aerial missions. While the four years of combat in the First World War would have remained the defining experience of air warfare for the individuals involved, the relatively short period of consolidation and conflict was crucial in shaping the corporate self-image of the nascent Hungarian air force. Hungarian airmen became accustomed to operating at a disadvantage, but remained committed advocates for the efficacy of air power in defence of the nation. This commitment was sustained even in the years after the proscription of a Hungarian air force by the Treaty of Trianon.

The idea of a national Hungarian air service first arose during the First World War within those Austro-Hungarian flying squadrons that had strong Magyar contingents. The air arm was too new to have been part of the traditional Habsburg regimental system, and there were no Honvédség or Landwehr flying units. Nevertheless, Magyar pilots, some of them perhaps fleeing the 'oppressive attitude of the ruling Austrians' (*az osztrák elnyomás uralkodo szelleme*), gravitated to those Fliks commanded by Hungarian officers such as László Hány, Sándor Hartzler, Géza Csenkey and István Wollemann.<sup>2</sup> This tendency toward voluntary segregation among fliers hints at the complicated relationship between Hungarian officers and the Habsburg state. The Common Army 'was the most important all-monarchical institution in the realm', its officers were the Army's 'nerve centre and spiritual

---

(Cambridge, Ma, 1957, pp. 8-10). The Hungarian air service, like the Habsburg force from which it descended, met these criteria. Huntington's analysis of what defines a modern officer corps is useful, although his later discussions of civil-military relations and objective control are not relevant.

<sup>2</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 109. The authors do not offer a reference for this claim.

essence', and they felt a particular duty to Francis Joseph, to whom they swore a personal oath of loyalty.<sup>3</sup> It was therefore a key centripetal force in the Monarchy, resisting the centrifugal pull of nationalism, any manifestation of which was openly deplored.<sup>4</sup> Regular officers, whatever their origins, were expected to be above nationalism. Magyars, however, were underrepresented in the regular army officer corps, since a large proportion of the martially minded chose instead to serve in the reserves or, better, in the Honvéd.<sup>5</sup> This choice expressed a nationalist sentiment, and it was recognised as such by some non-Magyars in the officer corps, who resented Hungarian obstructionism and the concessions carved out for Hungarian officers after the 1867 Compromise.<sup>6</sup> Such resentment could account for the 'oppressive attitude' described above. In any case, Hungarian airmen were drawn to the vision of a national independent air force, free from both Austrian oversight and army supervision.

That vision was realised sooner perhaps than they anticipated. On 6 November 1918, the Hungarian War Ministry established its 37th section, the Aviation Department (*Légügyi osztály*), and charged it with the direction of all aviation activity.<sup>7</sup> This clear line of control lasted just a few days. The government formed another body on 12 November, the Aviation Commission (*Légügyi Kormánybiztosság*), subordinate to both War and Commerce

---

<sup>3</sup> Deák, *Beyond Nationalism*, p. 4.

<sup>4</sup> Centripetal/centrifugal paradigm: Oszkár Jászi, cited in L. Cole and D. Unowsky (eds.), *The Limits of Loyalty: Imperial Symbolism, Popular Allegiances, and State Patriotism in the Late Habsburg Monarchy* (Oxford, 2007), p. 2. Opposition to nationalism: Deák, *Beyond Nationalism*, p. 183.

<sup>5</sup> In 1910, Hungarians made up 19.6% of the Imperial population, 23.1% of the Common Army's rank and file, 23.7% of reserve officers, but only 9.3% of career officers. See Stone, 'Army and Society', p. 99, and Deák, *Beyond Nationalism*, p. 179-183. Deák questions the accuracy of the ethnic calculations based on the accounting criteria, and thinks minorities among career officers may have identified as German due to their self-reported daily language.

<sup>6</sup> Rothenberg, *Army of Francis Joseph*, pp. 127, 146. Deák found that Magyar officers born in Hungary advanced faster than any other nationality (including Germans), and eight Honvéd officers were admitted to each general staff school course without having to take the admission exam.

<sup>7</sup> There seems to be no significance to the section's number: Section 36 was given to Peoples' Uprising, and 38 was for Equine Affairs.

Ministries, to coordinate national aeronautics. The Aviation Commission included an executive branch along with three others (research and development, engineering, and accounting), and had directly under it another department confusingly given the same designation (*Légügyi osztály*) as the War Ministry's 37th Section. The Commission's Aviation Department was separate from the War Ministry's, and it comprised four groups—traffic, personnel, engineering, and economic. Subordinate elements included the Air Corps Headquarters (*Légi Csapatparancsnokság*), the float-plane section, and aviation stores warehouses. There were also two departments based in Vienna that represented Hungarian interests in the liquidation of indivisible LFT assets.<sup>8</sup> That this was a complicated organisational structure is beyond doubt, but it was not without heritage and purpose. It remained somewhat simpler than the Habsburg military aviation organisation, under which the Flight Arsenal at Fischamend was also subordinate to two masters (in this case the AOK and War Ministry Aviation Department 5/L) and was composed of five departments, each of which was further divided into between eight and twenty-two sub-departments.<sup>9</sup> It was hoped that the labyrinthine lines of authority and subordination to the Commerce Ministry would protect Hungarian aviation from future Allied inspectors, and the proliferation of bureaus provided billets for experienced officers whose expertise might otherwise have been lost.<sup>10</sup> As for the perplexing arrangement, circumstances and personalities clarified institutional relationships in a way that lines on a chart never could. In spite of the Republic's official policy of pacifism and an interest in developing the aerial post, military aviation crowded out commercial flight in 1918-19, and the Commerce Ministry effectively

---

<sup>8</sup> T. Gellért, 'Adalékok a magyar Polgári Demokratikus Forradalom és a Tanácsköztársaság Légijerjének történetéhez', *HK*, 12/3 (1965), p. 504.

<sup>9</sup> Morrow, *German Air Power*, p. 182.

<sup>10</sup> Gellért, 'Adalékok a magyar történetéhez', p. 504.

ceded control of the Aviation Commission to the War Ministry. In January 1919, Lieutenant Colonel István Petróczy, the first Magyar military pilot and one of the most distinguished Hungarian aviators of the First World War, was selected to head the 37th Section. This made him the de facto chief of the air staff and gave him operational command of the Hungarian Flying Corps (*Repülőcsapat*) through the Air HQ.<sup>11</sup> The situation would be exactly reversed after Trianon, when the centre of Hungarian air power would necessarily shift to the Commerce Ministry.

Commissioner Sándor Hangay, Petróczy's predecessor at the 37th Section, called senior air service leaders to Budapest immediately after his appointment in November. When their conference at the Nádasdy barracks broke up, critical personnel and organisational questions had been settled. By order of the War Minister, airmen were exempted from forced demobilisation.<sup>12</sup> The new national flying corps initially consisted of three air companies (*repülőosztály*): the 1st Air Guard Company, commanded by Capt József Gergye; the 2nd Airmail Company, commanded by Capt Ernő Szalay; and the 3rd Operational Training Company, commanded by Capt Sándor Hartzer. The flying corps would soon grow to eight companies, with a further five companies planned but never activated. Hartzer's training unit was assigned to Rákosmező airfield, the centre of Hungarian pilot training since 1910. The 1st and 2nd companies shared the airfields at Mátyásföld and Albertfalva with the country's two largest aircraft manufacturing plants. Albertfalva was the home of UFAG, a Castiglioni firm whose 1,700 employees at peak wartime production rolled out 40 aircraft per month. The factory, which changed its name to Magyar Repülőgépgyár (MARE) in reflection of the times, built Brandenburg designs, primarily the C-I, a capable two-seat

---

<sup>11</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 122.

<sup>12</sup> Gellért, 'Adalékok a magyar történetéhez', p. 506.

multi-purpose machine, and the fine W-29 float-plane. Magyar Általános Gépgyár (MÁG) had its plant at Mátyásföld (1,100 employees, 24 aircraft per month peak production), and was the main Hungarian supplier for single-seat fighter craft, especially the Aviatik D-I and state-of-the-art Fokker D-VII.<sup>13</sup> Production was already below peak levels by the end of the war, due to the dearth of men and materials, and an Aviation Commission decision further reduced output. Having declared on 8 November ‘the time of peace had set in’, the Commission demanded a cut in aviation industry employment of 75 per cent, beginning with workers of foreign origin (including those Austrians and Czechs who were fellow Habsburg subjects weeks earlier).<sup>14</sup>

That this policy went against the instincts of the Hungarian airmen can be inferred from their subsequent actions to preserve and consolidate as much aviation matériel as possible in front of the advancing Allied armies. It was, however, entirely consonant with the outlook of the new government headed by Mihály Károlyi, a long-standing opponent of the war and ‘friend to democracy and peace’.<sup>15</sup> Károlyi’s National Council had come to power in a near-bloodless revolution on 31 October, carried along by an uprising of the newly established Soldiers’ Council, and its first priority was terminating the war. Béla Linder, the new minister of war, ordered Hungarian forces to disarm on 1 November.<sup>16</sup> Hostilities on the Italian front ended on 4 November, but reports of Allied incursions from the south made it clear that the Padua armistice did not constrain the Entente’s Armée d’Orient. On the same

---

<sup>13</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 110-13.

<sup>14</sup> Z. Czirók, ‘A magyar repülőcsapatok 1918-1919. évi történetéhez’, *HK*, 122/3 (September 2009), p. 614.

<sup>15</sup> M. Károlyi, *Memoirs of Michael Karolyi: Faith Without Illusion*, trans. C. Károlyi (Oxford, 1956), p. 102.

<sup>16</sup> M. Farkas, ‘The Military Collapse of the Austro-Hungarian Monarchy, October 24 to November 3, 1918’, in P. Pastor, (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), p. 20.

day that the War Ministry established its Aviation Section, Károlyi led a delegation to Belgrade to negotiate a ceasefire agreement with French General Louis Franchet d'Esperey. Franchet D'Esperey was cordial to Károlyi personally, but treated the delegation with disdain, reacting especially to the presence of Baron Hatvany, a Jew, and to the representative of the Soldiers' Council.<sup>17</sup> The armistice terms were harsh: Hungarian forces were to be withdrawn from most of Transylvania as well as from large portions of southern Hungary, Allied forces were to have the right of passage throughout the country, and Hungary's army was to be restricted to eight divisions.<sup>18</sup> In an apparent oversight that perhaps reflected a lack of knowledge or interest in aviation on the part of Franchet d'Esperey or his staff, the armistice did not specifically address aircraft, although it did require Hungary to disarm the remnants of its navy and deliver to Belgrade six armoured riverboats. (The Italians, having suffered much at the hands of Habsburg pilots in Brandenburg float-planes, insisted at Padua that 'all naval aircraft are to be concentrated and immobilised'.)<sup>19</sup> After receiving reassurance from Clemenceau that the agreement was strictly a military one—which Károlyi understood to mean that permanent lines of demarcation would be negotiated at the future peace conference—the National Council authorised Linder to sign the armistice. Allied troops, including Serbs and Romanians, contrary to Károlyi's specific request, immediately occupied the zones vacated by Hungarian forces. Meanwhile, the Czecho-Slovak National Council, dissatisfied with Article 17 of the Belgrade Armistice, the clause that permitted Hungarian administration of historically Hungarian lands, began to intervene militarily to bring disputed areas under

---

<sup>17</sup> Károlyi, *Memoirs*, p. 130.

<sup>18</sup> Text of Belgrade Armistice in B. Krizman, 'The Belgrade Armistice of 13 November 1918', *Slavonic and East European Review*, 48/11 (Jan 1970), pp. 85-7.

<sup>19</sup> *Armistice Conditions with Austria-Hungary*. 3 Nov 1918. <<http://www.forost.ungarisches-institut.de/pdf/19181103-1.pdf>>

Czechoslovak control. Károlyi momentarily abandoned the policy of passive resistance and used force to eject the Czechoslovak troops from Pozsony. Eduard Beneš, the Czechoslovak foreign minister, appealed to the French for assistance, which was promptly supplied in the form of a directive from the Allied Supreme Command for Hungarian evacuation of the contested land. With Article 17 thus rendered inoperative, Hungary's neighbours no longer felt constrained by the Big Four, and increased pressure on the Hungarian Republic's frontiers.<sup>20</sup> Disarmament continued nonetheless. These actions did not diminish Károlyi's belief that Hungary would receive justice from the Allies at the peace conference in accordance with Wilsonian ideals of self-determination.

Flying operations continued throughout this time. On 6 November, the 1st Air Guard Company's Lieutenant Viktor Stohrer led a three-ship formation on an 'air police' (*karhatalmi*) mission in the capital area to stop possible looting and agitation, and to drop leaflets encouraging support of the new government. Stohrer was dispatched again on 8 November on reports of civil disturbances, but he found the area calm. Later that day, two other fighters along with one of Szalay's 2nd Airmail Company planes were sent to Örkény at the request of the Pest County high sheriff (*főispán*) for reconnaissance and leaflet drops. One aircraft failed to return from the afternoon missions, but no casualties were reported. The 2nd Company also flew four air police missions on 10 November in Brandenburg C-Is. The situation was somewhat different in Transylvania, where the remnants of two reconnaissance Fliks were still flying combat sorties in support of the Székely detachment. On 7 November, these planes attacked a meeting of the Romanian National Council in

---

<sup>20</sup> P. Pastor, *Hungary Between Wilson and Lenin: The Hungarian Revolution of 1918-1919 and the Big Three* (New York, 1976), pp. 65, 69. The Czechoslovak incursion on 9 Nov forced Linder to resign. He signed in Belgrade as minister without portfolio and ambassador at large.

Tusnád, inflicting, by the observers' accounts, 150 casualties.<sup>21</sup> Though the damage report from the Tusnád raid was almost certainly inflated, consideration of the missions flown in the second week of November shows that in the midst of national confusion, the essential components of an air force were present and operable: aircraft were serviced, fuelled and armed; pilots were available for flight; and a command-and-control system functioned sufficiently for requests from proper authorities to be fulfilled. Furthermore, the capital-area air police sorties demonstrated a sophisticated and restrained use of air power, while the operations of the Székely company exhibited initiative and aggressiveness.

Hungarian airmen attempted, sometimes in vain, to keep their aviation stores out of the hands of the Entente. The War Ministry's Aviation Department was active on this front from its inception: on 6 November it sent a lieutenant to Csány airfield with orders to ship the hangars' contents to Budapest. The following days saw other officers assigned to the same task at Zalaegerszeg, Pándorfalu, and Kolozsvár. These first missions succeeded in salvaging crucial aircraft and parts, but a similar endeavour just days later at Újvidék failed. After being advised that the terms of the Belgrade Armistice would place that airfield, one of the Dual Monarchy's primary training bases, under Yugoslav control, the Aviation Department planned a large-scale evacuation of its aircraft to Szeged. Serb forces advanced more quickly than expected, however, and occupied Újvidék on 10 November, capturing every aircraft on the field with the exception of a 2nd Airmail Company plane that took off minutes before the Serbs arrived. Ninety miles east of Újvidék, Habsburg soldiers of Romanian extraction seized the airfield at Lugos in the name of the Romanian National Council. The station commander, who could muster just eighteen armed Magyars, was unable to offer effective resistance. An episode at Arad proved the air service was not

---

<sup>21</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 115-7.

immune from the confusion afflicting the disintegrating Common Army. A second Air Group (*Csoportparancsnokság*) was to be established there, and the Aviation Department requested the airfield's current strength. The initial report on 8 November from Major Frigyes Medvey, Arad's commander, counted twenty-one flyable planes. A more detailed and distressing report came two days later, explaining that, of the seventy machines possessed by the two squadrons at Arad, only seven were serviceable. With the Újvidék debacle in mind, Medvey was ordered to keep a section of aircraft on alert and prepare the rest for shipment by wagon to Szeged.<sup>22</sup> The flying corps did not desert Arad after all, maintaining a presence there until it was occupied by French troops in early January 1919 as part of the buffer zone between Hungarian and Romanian forces.<sup>23</sup>

After the intense activity in the first weeks of November, the air service settled in to a period of relative calm that lasted until the declaration of the Soviet Republic in March 1919. In these months the staff continued to oversee flight operations while it also inventoried, refurbished and distributed equipment, and attended to bureaucratic matters. Since Károlyi remained convinced that diplomacy would eventually reverse the territorial encroachment by Hungary's neighbours, the flying corps devoted most of its energy to performing reconnaissance, transport and liaison missions. Szalay's Airmail Company was especially helpful in the liaison role, as its ability to fly couriers around the country provided the new government with a method of communication that was fast, secure and fairly reliable. In contrast to the LFT, the air service embraced propaganda operations, dropping leaflets proclaiming the formation of the Hungarian Republic, and even on occasion

---

<sup>22</sup> Ibid.

<sup>23</sup> Czirók, 'A magyar repülőcsapatok', p. 607.

delivering copies of the socialist daily *Népszava* to workers in the countryside.<sup>24</sup> As technicians made planes airworthy, small detachments stood up at airfields across the country. Units at Arad, Szeged, Szombathely, Kaposvár, Beregszász, Pozsony and Kecskemét reported ready, although not all were tasked with missions. When the realities of equipment shortages and the shifting demarcation line set in, the Aviation Department gave up on its thirteen-company plan, and instead accepted an eight-company structure, with some companies having detachments at other locations. A streamlined version of this organisation, approved in January 1919 and updated in February, formed the basis for the Hungarian Soviet Republic's flying corps.<sup>25</sup> With the border situation deteriorating, Petróczy directed in late February an intermediate organisation consisting of six flying squadrons, one assigned to each of the six divisions. The 4th and 5th squadrons were to be re-constituted with eight aircraft each and were to proceed to the 4th and 5th division headquarters in Győr and Miskolc.<sup>26</sup>

The same material deficiencies that constrained the corps' size also affected personnel compensation. Pay for airmen was set at 500 koronas for pilots, 400 for observers and technical officers, 300 for engineers, and 100 for unskilled enlisted men. Fliers received monthly bonuses based on the distance of their flights, and pilots and engineers could earn additional pay for keeping the aircraft in good order.<sup>27</sup> In pre-war terms those were extravagant figures, since Hungary's per capita gross domestic product in 1913 totalled 435 koronas annually, but inflation had eroded much of the korona's purchasing power.<sup>28</sup> The cost of living was twenty-four times higher in 1919 than in 1913, and the 1919 korona held

---

<sup>24</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 120.

<sup>25</sup> Czirók, 'A magyar repülőcsapatok', pp. 606, 619.

<sup>26</sup> Hadtörténelmi Levéltár, Honvédelmi Minisztérium Elnöki (HL HM Eln.) 5141/37.-1919.

<sup>27</sup> Gellért, 'Adalékok a magyar történetéhez', p. 506-7.

<sup>28</sup> I. Romsics, *Hungary in the Twentieth Century*, trans. Tim Wilkinson (Budapest, 1999), p. 29.

only 1 per cent of its pre-war value.<sup>29</sup> Nevertheless, the monthly outlay of nearly 1.5 million koronas to pay the flying corps' 300 officers and 1000 enlisted men was 'a serious burden on the War Ministry's wallet'.<sup>30</sup> The Ministry's commitment to a dependable wage when the rest of the force was under mandatory demobilisation indicates a high level of governmental support for the air service. It does not, however, suggest that the flying corps was a mercenary force—the pay was not generous enough for that. As a comparison, the Red Army, not known for extravagant compensation, had to offer common soldiers 450 koronas per month (the pay of a lieutenant colonel in 1907) plus a family supplement in order to increase enlistments in March 1919.<sup>31</sup>

If money was not the primary motivation, what was? What encouraged men to stay in the air service in spite of danger and deprivation? A feeling of *esprit de corps* and adventure would surely have been part of the motivation. The reality of aerial combat strips away military aviation's romantic appeal, but not its fundamental challenge, and it offers a satisfaction and sense of camaraderie that few other activities can match. Prospects for promotion and advancement may also have played a role. Demobilisation forced the retirement of all general officers, and the Common Army's general staff was dissolved; these vacancies provided opportunities for ambitious airmen to make rank and to enhance the standing of air power within the new Hungarian security establishment.<sup>32</sup> But the evidence suggests that the Hungarian airmen were chiefly animated by patriotism.

---

<sup>29</sup> R. Nötel, 'International Credit and Finance', in M.C. Kaser and E.A. Radice (eds.) *The Economic History of Eastern Europe 1919-1975*, Vol. II (Oxford, 1986), pp. 178, 193.

<sup>30</sup> Gellért, 'Adalékok a magyar történetéhez', p. 506.

<sup>31</sup> 450 korona per month: E. Liptai, *A Magyar Vörös Hadsereg harcai, 1919* (Budapest, 1960), p. 55. Lt Col's pay in 1907: Deák, *Beyond Nationalism*, p. 119.

<sup>32</sup> S. Szakály, 'The Officer Corps of the Red Army', in P. Pastor, (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), pp. 170-2.

Although patriotism and nationalism are easily conflated, they can be distinguished. ‘The former seems to spring from love of home and the desire to protect it, while the latter is inspired by opposition or aversion to persons and things which are strange and unintelligible.’<sup>33</sup> And even if some have attributed the birth of modern nationalism to the Magyars’ opposition to Joseph II, and nationalism’s role in Hungarian history in the period 1920-45 cannot be overstated, the response of Hungarian airmen to the crises of 1919 is better explained by the desire to protect their homeland than by opposition to any other nationalities. They voiced no objection to Oszkár Jászi’s plan for a Danubian Confederation or to Béla Kun’s internationalist vision. Indeed, the best testimony of the airmen’s patriotism is the constancy of their service under widely divergent governments. The same men who joined the Habsburg Luftfahrtruppen flew under the flag of the bourgeois Hungarian Republic, the Hungarian Soviet Republic, and finally the Kingdom of Hungary. There were no purges or large-scale defections. With the single exception of Ernő Szalay, who was killed in a crash on 13 March, the repülőosztály commanders in the first order of battle issued by the Aviation Department of the People’s Committee for War (*Hadügyi Népbiztosság Légügyi Osztálya*) matched exactly the last one published by Károlyi’s War Ministry. The only apparent concession to communist ideals was the substitution of *proletárkatona* (proletarian soldier) for *százados* and *főhadnagy* (captain and lieutenant).<sup>34</sup> Perhaps more striking is that nearly all of those leaders retained their positions under Admiral Miklós Horthy’s counter-revolutionary government.<sup>35</sup>

---

<sup>33</sup> H.M. Chadwick, *The Nationalities of Europe and the Growth of National Ideologies* (Cambridge, 1945), p. 3.

<sup>34</sup> ‘A Hadügyi Népbiztosság Légügyi Osztálya intézkedik a repülőalakulatok hadiállapotba helyezéséről és a legfontosabb feladatokról, 1919 március 24’, in *A Magyar Vörös Hadsereg 1919, válogatott dokumentumok* (Budapest, 1959), pp. 85-6.

<sup>35</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 128, 143.

This was true to some lesser degree for the land force as well, as Red Army officers ‘merged almost completely into the National Army’, though in some cases their careers were monitored more closely as a result of their Red Army service.<sup>36</sup> Not all Red Army officers were accepted by the National Army; some were imprisoned and others were forced to retire or accept demotion.<sup>37</sup> For most, however, service with the Red Army did not stunt career progression in the Regent’s armed forces, and some reached the highest levels of leadership: of the thirty-five colonel generals in the 1938-45 Hungarian Army, fifteen had served in the Red Army.<sup>38</sup> Reconciliation of that degree argues strongly for the officer corps’ dedication to national defence. The majority of officers who left the Red Army for the Szeged Whites did so only after Béla Kun ordered the army to withdraw from Upper Hungary, a ‘fatal strategic and tactical mistake’ that led to widespread desertions.<sup>39</sup> While common soldiers might have fought ‘to defend the new society, and not the old frontiers’, officers felt much the opposite, questioning the need to defend a Soviet Republic that would sacrifice Hungarian territory.<sup>40</sup> In the aftermath of the retreat, both Minister of War Vilmos Böhm and Chief of Staff Aurél Stromfeld resigned in protest.<sup>41</sup> Stromfeld revealed the strength of his conviction in a diary entry addressed to his recently deceased sister: ‘You, a fanatical lover of the Hungarian fatherland, you now lie in foreign soil [Slovakia]. Was I not

---

<sup>36</sup> Szakály, ‘Officer Corps of the Red Army’, p. 175.

<sup>37</sup> Ibid.

<sup>38</sup> I. Romsics, ‘The Social Basis of the Communist Revolution and of the Counterrevolutions in Hungary’ in P. Pastor, (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), p. 160.

<sup>39</sup> R. Tőkés, *Béla Kun and the Hungarian Soviet Republic* (London, 1967), p. 200.

<sup>40</sup> T. Hajdú, *The Hungarian Soviet Republic* (Budapest, 1979), p. 143.

<sup>41</sup> P. Gosztony, ‘The Collapse of the Hungarian Red Army’ in P. Pastor, (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), p. 70.

right to have tried to prevent this?’<sup>42</sup> The resignations and desertions were not caused by disillusionment with communist ideology or even battlefield losses (although those were soon coming), but rather because many soldiers no longer believed that the Kun regime was willing or able to defend the country’s borders. This realisation was felt as a betrayal by a pair of officers who joined the Red Army for explicitly patriotic reasons, which they later related to a historian: ‘Even if we start into battle under red flags, by the time we reach the Carpathians our colours will be red-white-green!’<sup>43</sup> A former Red Army political commissar acknowledged in a posthumous article decades later that ‘the Red Army was in essence a Hungarian army: it was defending against foreign attacks.’<sup>44</sup>

If the airmen of the VR and Red Army officers were motivated largely by patriotism and not revolutionary fervour, what was the nature of their obligation to the successive administrations in Budapest? It seems that the Hungarian officer corps exhibited conditional loyalty to the governments of the revolutionary period. A regime earned the officer corps’ support and service to the extent that it defended Hungary, and that support was liable to be withdrawn. It can be argued that conditional loyalty is no loyalty at all—a government that must take into account the desires of its armed forces in formulating security policy is the servant, not the master. But that view reduces a nation to nothing more than its government. Such an idea would have been foreign to Habsburg officers, who pledged fealty to the Emperor, and not to a particular combination of ministers, and its Hungarian successors carried on the concept, with the integrity of historic Hungary standing in place of the monarch. In western democracies the situation is little different: British and American

---

<sup>42</sup> E.S. Balogh, ‘Nationality Problems of the Hungarian Soviet Republic’, in I. Völgyes (ed.), *Hungary in Revolution, 1919: Nine Essays* (Lincoln, Ne., 1971), p. 114.

<sup>43</sup> Quoted in Gosztony, ‘Collapse of the Red Army’, p. 76.

<sup>44</sup> Ibid. The commissar in question was the Marxist philosopher György Lukács; the article was published in *Élet és Irodalom* in May 1975.

officers, then as now, swear allegiance not to governments but to the Crown and Constitution. The Soviet Republic benefited from officer corps' willingness to transfer allegiance from one government to another in March 1919, just as it suffered in June and July when the retreat from Felvidék undermined its legitimacy. The Hungarian officer corps was professional, but that did not mean it was apolitical. Habsburg officers had seemed so only because of their close identification with the person of Francis Joseph. Once the Empire dissolved and revolution ensued, the officer corps' conservatism stood out in stark contrast, being no longer part of the background, but having a shape and colour of its own. Nevertheless, most of the officers suppressed any personal dissatisfaction about the particularities of their new governments' domestic agendas, and when permitted, served faithfully and bravely. A minority of restorationist and committed anti-communist officers began plotting against the revolutions, first in Vienna and later in French-controlled Szeged.

The Hungarian Soviet Republic came into being on 21 March 1919, following the crisis brought about by the Allies' demand that Hungarian forces in the east withdraw some sixty miles further west, thereby ceding several thousand square miles to Romania.<sup>45</sup> The Entente, anticipating a large-scale invasion of Soviet Russia, wanted to secure eastern Hungary as a base of its operations.<sup>46</sup> Károlyi believed the new lines to be final political decisions, and concluded that the Allies had finally and completely abrogated the terms of the Belgrade Armistice.<sup>47</sup> His government, whose legitimacy rested in large part on the assumption that it could garner good will and fair treatment from the Entente, was paralysed. Nationalist

---

<sup>45</sup> Sixty miles west: T. Hajdu, 'Revolution, Counterrevolution, Consolidation' in P.F. Sugar et al. (eds.), *A History of Hungary* (Bloomington, 1990), p. 302; several thousand square miles: Károlyi, *Memoirs*, p. 152.

<sup>46</sup> Romsics, *Hungary in 20th Century*, p. 98.

<sup>47</sup> Károlyi, *Memoirs*, p. 152. Vix denied having stated that the boundaries represented a final decision. Bryan Cartledge in *The Will to Survive: A History of Hungary* (London, 2006) says the evidence that he did so is 'compelling' (p. 307).

members of the cabinet ‘could not accept the responsibility of giving up such extensive territories before the Peace Treaty was signed’, but the party was too weak to command the country in resistance to the ultimatum.<sup>48</sup> The government therefore rejected the Allied demand as relayed by French Lieutenant Colonel Vix and immediately resigned. Károlyi remained head of state, and he asked the Social Democrats, who had the support of the trade unions (the best organised and functioning segment of Hungarian life at the time), to form a government that would seek help from the Soviet Union. They agreed, but entered without Károlyi’s knowledge into power-sharing negotiations with the Communists, whose leader, a journalist and former prisoner of war named Béla Kun, was still in jail for his role in a communist-inspired mob attack on the Social Democrat paper *Népszava*.<sup>49</sup> Later that evening, believing it was still in his power to do so, Károlyi appointed the centrist socialist Zsigmond Kunfi prime minister. In fact, the Workers’ Council had already effectively seized power. Károlyi was notified of this when his secretary asked him to sign a prepared document in which he resigned and turned power over to the Hungarian workers. He refused, but was informed that the morning papers had already printed his resignation, and that posters proclaiming a dictatorship of the proletariat were appearing all over the capital. Feeling that clinging to power would incite a civil war, Károlyi retired to the Buda hills.<sup>50</sup>

On the morning of 22 March, thirty-three ‘people’s commissars’ convened the first Revolutionary Governing Council (*Forradalmi Kormányzótanács*) of the new state—the Hungarian Soviet Republic (*Magyarországi Szocialista Szövetséges Tanácsköztársaság*).<sup>51</sup> The Social Democrat Sándor Garbai was elected President of the Council, but Kun, as the

---

<sup>48</sup> Károlyi, *Memoirs*, pp. 153-4.

<sup>49</sup> Cartledge, *Will to Survive*, p. 306.

<sup>50</sup> Károlyi, *Memoirs*, pp. 154-58, and Pastor, *Between Wilson and Lenin*, p. 143.

<sup>51</sup> R.L. Tökés, *Béla Kun and the Hungarian Soviet Republic: The Origins and Role of the Communist Party of Hungary in the Revolutions of 1918-1919* (London, 1967), p. 137.

People's Commissariat of Foreign Affairs, was wholly in control of the Council.<sup>52</sup> Although the 21 March manifesto had declared 'complete ideological unity with the Soviet government' and offered 'the proletariat of Russia a military alliance', Kun immediately sent Károlyi on a mission to Vienna to open negotiations with the Entente. Károlyi was to pledge that the Hungarian Soviet forces would not join with the Russian Red Army and would not spread revolution abroad. In return, the Allies should hold plebiscites in the disputed territories and provide Hungary with food aid.<sup>53</sup> Nothing came of the Károlyi mission, but the Entente, now keenly interested in Hungarian matters but deluged with conflicting reports, did send a mission of its own to Budapest, led by the South African general Jan Smuts. Smuts offered Kun some concessions, namely an adjustment to the Vix lines in Hungary's favour, and acknowledgement that further changes could be possible. Kun submitted a counter-offer, demanding a conference of Hungary's neighbours to discuss territorial and economic matters. Smuts, who had been charged with presenting the Entente's position and who was not authorised to negotiate further, left Budapest the next day. In his report to the Entente, Smuts supported Kun's idea of a regional conference and suggested that the economic blockade be lifted once the Hungarians accepted the new demarcation lines. 'Paris was not too interested in his propositions but paid close attention to his conclusion: Hungary truly had an essentially Bolshevik government.'<sup>54</sup> With this established, the French army command continued its preparations for a military intervention.

---

<sup>52</sup> Cartledge, *Will to Survive*, p. 309.

<sup>53</sup> Pastor, *Between Wilson and Lenin*, p. 145.

<sup>54</sup> Hajdu, 'Revolution', p. 304. Károlyi wrote of Smuts' offer, 'These amazingly favourable conditions should have been accepted without delay'.

Czechoslovak and Yugoslav units were not ready for action, so the invasion was left to the Romanians.<sup>55</sup>

The 24 March 1919 order from the Aviation Department of the People's Committee for War (hereafter once again 'Aviation Department'; this piece of the Soviet bureaucracy maintained both its previous character and numerical designation) was the foundational document for the Vörös Repülőcsapat. After a brief summary of the events that led to the establishment of the Hungarian Soviet Republic, the order declared 'the entire flying formation stands in the service of the new Red Army, and is placed in a state of war.'<sup>56</sup> It accepted as the VR's current order of battle the earlier flying corps organisation, with eight operational flying companies at eight airfields. This order established capital air defence procedures and instructions for maintaining telephonic contact with Air HQ. The Aviation Department warned that Budapest's industrial areas could come under air attack at any time, and it therefore instituted an aerial observation zone extending in a semi-circle from the capital sixty miles south. The order also detailed air raid alarm procedures. The entire force was directed to respond to unknown inbound aircraft; the Aviation Department specified a dedicated telephone line for the signal; and it instructed observers to note the intruders' type, number, flight direction, location, and estimated time over Budapest. Finally, it set expectations for air alert postures. Each company and detachment was to have one aircraft and crew on thirty-minute alert status from 07.00 until twilight. Companies in Budapest, Szeged and Debrecen were required to have an additional plane and crew ready to take off within ninety minutes daily from 08.00 until 17.00.<sup>57</sup>

---

<sup>55</sup> Romsics, *Hungary in 20th Century*, p. 105.

<sup>56</sup> 'A Népbiztosság Légügyi Osztálya intézkedik', pp. 85-7.

<sup>57</sup> Ibid.

Eventually the air defence system around the capital incorporated anti-aircraft artillery. The first emplacements, sited on hills overlooking Budapest and near the Rákosmező airfield, comprised discarded Model 75 90-millimetre cannon. Air defence efforts intensified after hostilities began in April. The formation of the Budapest Air Defence Artillery Command in May 1919 brought order to the ground-based defence and extended the AAA coverage to a few batteries guarding the Csepel Island arms manufacturing plants. The Csepel batteries were armed with the more modern 76 mm guns capable of firing 10-15 rounds per minute with a maximum range of 12,000 feet.<sup>58</sup> By early summer 1919, the 43rd Artillery Regiment was established as an anti-aircraft unit with five batteries, the fifth and newest protecting the western industrial city of Győr. In July, concern about night bombardment led to seven searchlight sections being deployed on strategic hills and rail lines around Budapest. Concentration of the few medium-calibre AAA pieces meant that ground-based air defence in the field consisted primarily of rifles and machine guns.<sup>59</sup>

The Soviet Republic had a three week respite from the time of its founding until war began. While Kun met with Smuts, the Red Army tried to fill its ranks with proletarian soldiers. An air staff order on 8 April changed the Vörös Repülőcsapat's structure. The flying companies were re-designated as squadrons and given new numbers. Squadrons 1 through 7 (now at Kaposvár, Albertfalva, Rákosmező, Győr, Kecskemét, Békéscsaba and Debrecen) took operational orders from the 1st through 6th Infantry Divisions and the Székely detachment.<sup>60</sup> Air HQ retained responsibility for training, supplying and staffing

---

<sup>58</sup> Deployment: Z. Czirók, 'Az első légiháború Magyarország felett-1919', *HK*, 2/2011, p. 338. 76mm capability: Z. Barczy and Gy. Sárhidai, *A Magyar Királyi Honvédség Légvédelme, 1920-1945* (Budapest 2010), p. 10.

<sup>59</sup> Czirók, 'Első légiháború Magyarország felett', pp. 338-9.

<sup>60</sup> Liptai, *Magyar Vörös Hadsereg harcai*, 73, and Csizmarik, 'Magyar Tanácsköztársaság Légereje', pp. 355-7.

these units. Control of the 8th Squadron (László Háy's fighter unit based at Mátyásföld) remained with Air HQ, but the 9th Squadron at Csepel Island (István Wollemann's float-plane fighters) were placed under the Warship HQ.<sup>61</sup> This reorganisation was in part a reversion to the early days of military aviation, and stood in contrast to the general trend in the West toward centralised control of air power. A return to a field aviation model was not, however, an unreasonable response to conditions. Since the VR's primary mission was conducting reconnaissance in support of land forces, physical proximity and organisational subordination to those forces maximised effectiveness. Consolidation of aircraft in a single area under Air HQ control would have eased the VR's supply problem and might have put more planes in the air, but this advantage would have been offset to some degree by the increase in flight time to the front, and the coordination required between air and ground units which were no longer co-located. The relative merits of centralised versus distributed air power would be debated for years to come in professional journals and defence committees around the world, including in Hungary, but there is no evidence that this particular solution to the problem was controversial. The Aviation Commission's arrangement gave control of the capital defence force (8th Squadron's single-seat fighters) to Air HQ, while ensuring that army formations around the country could count on aerial reconnaissance assets that were available and responsive, if limited in number.

When the Romanian army attacked across the broad eastern front on 16 April, the nine squadrons of the VR had a programmed strength of 78 aircraft. The exact number of aircraft available on that day is unclear, but since only the Békéscsaba and Debrecen squadrons were engaged (the others being kept on defensive duty around the rest of the country), the figure

---

<sup>61</sup> Gellért, 'Adalékok a magyar történetéhez', p. 510. Liptai places the float-planes also under Air HQ control, but Gellért's account accords with Nagyváradí and Szabó's contention that 9th Squadron largely supported riverine operations (136).

could not have exceeded fourteen, and based on later, more exact tallies, was probably closer to the six that the 5th and 7th Squadrons reported as serviceable on 19 April. Pilots and observers of all ranks, including those in command and staff billets, numbered 317. Romanian air support came from the three squadrons of Grupul 5, which should have fielded thirty aircraft, but had in actuality only a dozen, primarily Sopwith and Nieuport machines.<sup>62</sup> The roughly two-to-one advantage enjoyed by Grupul 5 extended to the infantry, which fielded sixty-four regiments against thirty-five Hungarian battalions, and the Romanian edge in artillery and cavalry was even greater.<sup>63</sup> Benefits that normally accrue to the defenders, including prepared positions, shorter interior lines, and the incentive of fighting for one's own land, seem to have accounted for little in this case, and the Hungarians were defeated across the front. Their army had been deliberately neglected under Károlyi, communist political agitation had caused dissension in the ranks, and discipline was lax. The Red Army's recruitment drive had added 20,000 soldiers in ten days, and communist volunteers arrived from other countries (1,200 from Austria), but the reinforcements could not be fielded in time to stop the Romanian advance.<sup>64</sup>

Due to the chaotic retreat of the Hungarian forces, the VR contributed very little in this first round of fighting. Its crews conducted reconnaissance missions, but the information proved of small value to forces that were already under constant pressure. The Romanians' rapid advance forced the Debrecen squadron to flee to Mátyásföld on 23 April. At first only a single UFAG/MARE C-I escaped, but the following morning a second machine made it out, getting airborne just as Romanian cavalry fired on the field.

---

<sup>62</sup> Czirók, 'A magyar repülőcsapatok', pp. 620-7.

<sup>63</sup> L. Fogarassy, 'The Eastern Campaign of the Hungarian Red Army, April 1919', in P. Pastor, (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), pp. 36-7.

<sup>64</sup> Liptai, *Magyar Vörös Hadsereg harcai*, pp. 64, 70.

Grupul 5 airmen, like their Hungarian counterparts, had before the invasion mostly flown reconnaissance and propaganda missions—in this case, scattering leaflets to encourage ethnic Romanians to rise up against the Magyar authorities. After hostilities commenced, Romanian airmen continued reconnaissance activities, but also intervened directly in the ground war, conducting low-level attacks on retreating Hungarian columns and bombing the airfield at Nagyszalonta. Due to the small numbers of planes involved on both sides, opposing airmen rarely encountered each other and there are no reports of air-to-air combat. One VR two-seater did make a forced landing behind Romanian lines, after which the crew was captured and the aircraft was repaired and pressed into service by the Romanians.<sup>65</sup> Red Army troops fell back throughout the last week of April, and by 1 May, Romanian forces were established along the entire eastern bank of the Tisza River. The next day Kun sought a ceasefire, and under pressure from the Entente, Romania agreed.

Even in the midst of battlefield setbacks the Hungarian Soviet Republic observed official communist May Day celebrations, and the Vörös Repülőcsapat had a role. One VR pilot recalled flying low over the Danube, around the Vár, and above the Vérmező, where he saw thousands of people. He and his flight mates reacted naturally—they buzzed the crowd. ‘We arrived unexpectedly, which surprised the celebrating masses, and we flew so low that at the same time everybody stood looking in fascination at our aeroplanes.’<sup>66</sup>

The Soviet Republic leaders were shocked at the ease with which the Romanians had defeated its army. Vilmos Böhm, the Social Democrat leader of the five-member People’s Committee for War, had earlier recalled to active service Colonel Aurél Stromfeld, and now

---

<sup>65</sup> D. Bernád, ‘A Román Királyi Légierő első magyarországi hadjárata’, *Aero Historia*, (Aug. 1991), p. 32-4.

<sup>66</sup> M. Horváth, ‘Visszaemlékezés (Repülő élményei 1915- től 1918-ig és 1919-es tábori pilóta élményei)’, *Hadtörténelmi Levéltár Tanulmánygyűjtemény* (HL Tgy) 3.643, pp. 17-8.

Böhm appointed him Chief of Staff and charged him with revitalising the Red Army. Stromfeld, also a Social Democrat, was a gifted former Habsburg general staff officer who had resigned his post in February 1919 after a five-week army recruiting campaign that was expected to return 70,000 soldiers yielded only 5,000.<sup>67</sup> Fortunately, the reality of the 16 April invasion had encouraged enlistment in a way that the mere threat of it in February had not, so Stromfeld's immediate problem was not a lack of soldiers, but rather poor leadership. Recruiting materials began to address directly former Habsburg officers, appealing openly to nationalist sentiment. Leaflets that weeks earlier cried out to 'Proletariat soldiers! Comrades!' now implored 'Commanders! Former officers!... We trust you!'. Claims that workers who did not 'rush enthusiastically and resolutely' to the recruiting office were not real communists or socialists were replaced by references to 'thieving Romanian boyar occupying forces' (*román bojárok rabló csapatai tartanak megszállva*).<sup>68</sup> No longer barred from service because of class distinctions, former officers, over half of whom came from territories presently occupied by the Entente, joined the Red Army by the hundreds.<sup>69</sup> Their combat experience, planning expertise, and steady leadership were crucial to the Red Army's success in the northern campaign. With professional officers in charge, the fifty battalions of Jenő Landler's III Corps regained over 1,100 square miles of Upper Hungary in three weeks.<sup>70</sup> Stromfeld also introduced measures to streamline unity of command and

---

<sup>67</sup> G. Vermes, 'The October Revolution in Hungary: From Károlyi to Kun' in I. Völgyes (ed.), *Hungary in Revolution, 1919: Nine Essays* (Lincoln, Ne., 1971), p. 54.

<sup>68</sup> *A Magyar Tanácsköztársaság Röplapjai: bibliográfia és dokumentumgyűjtemény* (Budapest, 1959), pp. 35, 84, 163, 250.

<sup>69</sup> Szakály, 'Officer Corps of the Red Army', p. 172.

<sup>70</sup> Gosztony, 'Collapse of the Red Army', p. 69.

effort, including the creation of a general headquarters (*Hadsereg főparancsnokság*, or HFP) to exercise operational control of all Red forces.<sup>71</sup>

As the Chief of Staff exerted more influence over the Red Army as a whole, the General Staff started to task more directly the VR squadrons, and the division-based system weakened. On 8 May, the HFP issued detailed reconnaissance mission orders that allocated the 1st, 4th and 5th squadrons to I and II Corps, left the 3rd Squadron assigned to its division, and kept the 2nd, 6th, 7th and 8th Squadrons to itself for tasking. The next day, the HFP created an air group from the last four squadrons. This arrangement did not affect the other units, and on 16 May, the 8th Squadron was assigned to III Corps. The movement of squadron alignment from division to corps was formalised in a 28 May order from the People's War Committee. In the last major structural change in the VR, control of the flying units (all now honoured with 'Red' in their names, and the single-seat units designated as fighter squadrons) was returned to the Air HQ, with operational command delegated to the army corps.<sup>72</sup> The exact rationale for this series of decisions is unclear, but it fits the trend of increased centralisation across the HSR armed forces as the competence of commanders and staffs grew and the disorder of the retreat subsided. Acquisition authority still resided with the Aviation Department, and on 24 May it proposed production targets to aircraft manufacturers. The suggested output was twenty aircraft per month: ten from MARE, six from MÁG, and four from Lloyd. That rate of production, it calculated, would allow complete replacement of five ten-plane squadrons per quarter, after accounting for the diversion of ten aircraft to training schools.<sup>73</sup> The next quarter's production figures are not

---

<sup>71</sup> Csizmarik, 'Magyar Tanácsköztársaság Légierije', p. 355.

<sup>72</sup> Ibid. pp. 361-2, and T. Gellért, 'Adalékok a magyar történetéhez', p. 511.

<sup>73</sup> 'A Hadügyi Népbiztosság Légügyi Osztályának előterjesztése a repülőgépgyártásról', in *A Magyar Vörös Hadsereg 1919, Válogatott Dokumentumok* (Budapest, 1959), pp. 265-6.

available, but from November 1918 to August 1919 Hungarian factories turned out 123 aircraft.<sup>74</sup>

On the evening of 19 May, the Red Army launched an offensive against Czechoslovakia. The regime judged the Czechoslovak army to be the weakest of the occupying forces, the Felvidék counties of Nógrád and Borsod were rich in manufacturing capacity, and the industrialised Czech lands appeared ripe for a proletarian revolution.<sup>75</sup> If successful, the invasion would reclaim part of Upper Hungary, establish a Slovak Soviet Republic, and overthrow the imperialist regime in Prague. Kun timed the operation to coincide with a planned uprising in Vienna, and he hoped that HSR troops would link up with the Russian Red Army attacking across Bessarabia. The Austrian rising fizzled and the Russian cavalry never arrived. Landler's III Corps acquitted itself well, however, and captured Miskolc on the morning of 21 May.<sup>76</sup> This victory energised the men and in less than three weeks they routed the Czech army. Hungarian airmen played a bigger role in the northern campaign than they had in the April fighting against Romania. They conducted reconnaissance sorties before and during the invasion, attacked Czechoslovak ground forces, and served in the liaison role. One event brings to mind the 1911 autumn manoeuvres in the Pilis Mountains. On the first day of the advance, counter-attacking Czechoslovak forces had cut off the 3rd Division's 80th International Brigade in Salgótarján. The division immediately dispatched a crew from the 3rd Squadron, who dropped instructions to the brigade to turn south to

---

<sup>74</sup> Czirók, 'A magyar repülőcsapatok', p. 616.

<sup>75</sup> Balogh, 'Nationality Problems', p. 114.

<sup>76</sup> T. Hetés, 'The Northern Campaign of the Hungarian Red Army, 1919', in P. Pastor, (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), p. 56.

envelop the Czechoslovaks.<sup>77</sup> Some aerial attacks were made in close support of infantry (the method of coordination between air and ground is not recorded), but most targets seem to have been on fixed sites or along lines of communications. Armoured trains fit in the last category, and they were perhaps the best-defended asset on the battlefield. Two 8th Squadron airmen were killed and Mátyás Bernárd, the new commander of the 7th Squadron, was seriously wounded during an attack on an armoured train on 29 May. Even the float-planes of the 9th Squadron saw action, supporting the river monitor operations and bombing an artillery battery in Komárom.<sup>78</sup> Counter-revolutionary river monitors became the targets of the VR on at least one occasion, when on 24 June the 8th Squadron was ordered to bomb gunships manned by anti-Kun forces that had attacked targets along the capital's riverbanks.<sup>79</sup>

The Czechoslovak air force was manned, like the VR, by pilots from the LFT. Unlike Hungary, Czechoslovakia did not have its own defence establishment under the Dual Monarchy. There were, of course, regiments raised from the Czech and Slovak lands, but they did not match the number of Magyars in the Common Army, and there was no home guard or staff equivalent to the Honvédség.<sup>80</sup> On the other hand, Czechoslovakia enjoyed material support from the Entente, including eventually the direct intervention of a French squadron. Although Czechoslovakian airmen planned for an eighty-two plane force of six squadrons, in December 1918 they had only eighteen serviceable machines in two

---

<sup>77</sup> 'A 3. Hadosztályparancsnokság repülőgépről ledobott parancsában utasítja a salgótarjánál bekerített csapatokat déli irányú támadásra', in *A Magyar Vörös Hadsereg 1919, Válogatott Dokumentumok* (Budapest, 1959), p. 287.

<sup>78</sup> Csizmarik, 'Magyar Tanácsköztársaság Légierije', p. 381, and Nagyváradai et al., *Fejezetek a repülés történetéből*, p. 135.

<sup>79</sup> Horváth, 'Visszaemlékezés', p. 27.

<sup>80</sup> Of every 1,000 men in the Habsburg army, 223 were Magyars, 135 Czechs, and 38 Slovaks. G. E. Rothenberg, 'The Habsburg Army in the First World War: 1914-1918', in R. Kann et al. (eds.), *The Habsburg Empire in World War I* (Boulder, Co., 1977), p. 74.

squadrons. In early February the number was down to seven, but they added four flyable reconnaissance planes later that month with the capture of the Hungarian airfield at Kassa. Czechoslovak forces flew fifty-nine combat sorties during the northern campaign. The French unit attached to them, a mixed squadron of Breguet and Salmson reconnaissance-bombers and SPAD fighters, flew more than a hundred missions and provided excellent support to the ground forces, but did not change the outcome of the campaign.<sup>81</sup>

The Hungarian attack on Czechoslovakia was a tactical and operational success, but a strategic failure. The Red Army decisively defeated the enemy forces, reclaimed a thousand square miles of territory, and established a friendly revolutionary government in rump Slovakia. But Kun eventually gave in to Entente pressure to pull out of Slovakia, after securing a promise for a reciprocal Romanian retreat from the Tisza. Romania did not comply with the deal made in its name, and Hungary's voluntary withdrawal did irreparable harm to the Red Army. 'The governing council's decision fundamentally broke the morale of the troops ordered back to Hungary.'<sup>82</sup> Its top leaders resigned, there was an unsuccessful coup attempt, and the National Army became a more hospitable place for non-communist patriots. The chaos threatened the existence of the HSR, and for that reason the committed internationalist Kun ordered the Red Army to prepare to eject the Romanian army. Universal conscription, made necessary by desertions and refused orders, was introduced on 12 July. In some divisions the situation resembled the last weeks of the First World War. Nevertheless, Jenő Landler and Ferenc Julier, the new commander-in-chief and chief of staff, planned the offensive, which began on 20 July. The Hungarians had some success early and managed a few bridgeheads on the east side of the Tisza, but the success was

---

<sup>81</sup> Czirók, 'A magyar repülőcsapatok', pp. 624-5.

<sup>82</sup> Gosztony, 'Collapse of the Red Army', p. 69.

short-lived. On the fourth day Romanian reserves arrived. They pushed the Red Army back and eventually forced the river. From 31 July, defeat turned to catastrophe. Julier reported that the troops ‘did not want to fight any more at any price.’<sup>83</sup> That same day Kun received Lenin’s response to Kun’s telegram for help. Lenin allowed that he would like to help his Magyar friends, but his own poverty of armed force precluded it.<sup>84</sup> Kun correctly apprehended the situation and the following day he addressed the Budapest Workers’ Council, declared that the dictatorship of the proletariat had collapsed, and fled to Austria on a special train. On 4 August, Romanian troops entered Budapest.

Air operations on the eastern front had intensified well before the ground offensive was launched in late July. Both sides conducted reconnaissance flights as well as defensive fighter sorties. On the morning of 12 June, two 8th Fighter Squadron pilots recorded the first air-to-air victory for a national Hungarian air force. Géza Keisz and László Újváry were scrambled on reports of a Romanian observation plane in the vicinity of Miskolc. They caught the plane, a captured UFAG C-I in Romanian colours, headed toward the demarcation line southeast of Miskolc. Keisz and Újváry chased it to three hundred feet before Újváry, an Italian front ace, shot it down. Both Grupul 5 airmen were killed. Three days later another 8th Fighter Squadron pilot, József Kretz, scored a victory on the northern front. Kretz, flying an Aviatik D-I, shot down a Breguet bomber that was attempting to bomb Győr.<sup>85</sup>

For the July offensive, four squadrons (2nd, 3rd, 6th and 8th), comprising twenty-four aircraft, were available to the VR. Grupul 5 had three squadrons, and on 20 July could field

---

<sup>83</sup> Ibid. pp. 71-73.

<sup>84</sup> ‘Lenin távirata Kun Bélához a kért katonai segítség ügyében’, in *A Magyar Vörös Hadsereg 1919, Válogatott Dokumentumok* (Budapest, 1959), pp. 481-2.

<sup>85</sup> Bernád, ‘A Román Királyi Légierő első magyarországi hadjárata’, p. 37.

seventeen aeroplanes—ten fighters and seven two-seaters, of which eight were Hungarian machines captured on airfields or after forced landings. At the end of the fighting, only six Grupul 5 planes were serviceable. France tried to assist the Romanian air force by sending twenty Breguet bombers, but of the first eight deliveries, only two reached the front; the others crashed due to bad weather or the inexperience of their Romanian crews.<sup>86</sup> As in April, the length of the front (150 miles) divided by the number of aircraft engaged (perhaps twenty on both sides in a day) gave a very low aircraft density, and therefore few opportunities for dogfights. Reconnaissance was the primary mission of both forces. But some squadrons, including the VR's 5th Squadron at Kecskemét, which received in late June two new Brandenburg C-Is and three refurbished Anatra trainers, managed a number of ground attack sorties. They broke up a Romanian column near Szentes on 21 July, and the following day three squadron aircraft supported the Red Army in the same area with bombs (most likely 25-pound devices) and strafing attacks.<sup>87</sup> On 31 July, the last day of organised resistance, 2nd Squadron crews, also flying from Kecskemét, bombed bridges on the Tisza to slow the Romanian advance.<sup>88</sup>

The Vörös Repülőcsapat maintained its cohesion until the end, with no signs of the dissension that corrupted the land component of the Red Army. Aeroplanes eventually have to land, however, and when the Red Army no longer could provide the VR a secure airstrip, it ceased to be an effective combat force. In the aftermath of the Romanian occupation, it nearly ceased to be a force at all. When Romanian troops captured Kecskemét, all eight of the remaining 2nd and 5th Squadron aircraft were seized. The same fate befell the 6th

---

<sup>86</sup> Czirók, 'A magyar repülőcsapatok', pp. 625-6.

<sup>87</sup> D. Kenyeres, *Kecskeméti katonai repülés története kezdetektől a Gripenig* (Kecskemét, 2006), pp. 19-21.

<sup>88</sup> Csizmarik, 'Magyar Tanácsköztársaság Légieréje', pp. 385-6.

Squadron, which had packed its equipment on rail cars and fled. The unit made it as far as Gödöllő before being caught. The newly created 10th Squadron's eight Berg fighters never made it away from the factory at Rákosmező. Ninth Squadron had only two W-29s left, but they too were captured. Elements of the 1st, 2nd, 4th and 8th Squadrons managed to escape to Transdanubia, and these aircraft formed the basis for the brief pre-Trianon national air force.<sup>89</sup>

White forces in Szeged had created a paper squadron four months earlier and had offered 5,000 koronas for any pilot who defected with an aeroplane, but there were no takers. A later plan called for a five-squadron force that included an Austrian detachment to support the counter-revolutionary Lejár group. A party was dispatched to Vienna to secure thirty aeroplanes from the Liquidation Commission, but this attempt was blocked by the ruling Social Democrats' boycott on the transfer of arms to the Whites.<sup>90</sup> Therefore the flying corps prepared for the re-occupation of Budapest with the handful of aircraft saved from the Romanians.

The War Ministry (*Hadügyminisztérium*) reorganised the 37th (Légügyi) Section on 22 Aug 1919 and officially established the National Army Flying Corps on 12 October. Lieutenant Colonel István Petrőczy was tasked to lead the thirteen officers of 37th Section.<sup>91</sup> At the head of the Flying Corps was Major Artúr Bogyay, Hangay's deputy in the Károlyi-era service and later the commander of the 1st Air Group. Subordinate units included squadrons at Szeged, Szombathely and Budapest, with a detachment at Siófok. The Szeged squadrons had approximately fifteen officers and eighty enlisted men, and shared the three operable aircraft. Vince Martinek, commander of the 5th Squadron at Szeged in the VR,

<sup>89</sup> Bernád, 'A Román Királyi Légierő első magyarországi hadjárata', pp. 40-41.

<sup>90</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 142.

<sup>91</sup> J. Vesztey, 'A magyar katonai repülés, 1920-1945', HL Tgy 2.787, p. 1/24.

commanded the new training squadron there. At Szombathely, László Hány led the remains of the 8th Fighter Squadron: sixteen officers, thirteen NCOs, fifty-five men and five—later two—aircraft. József Steiner, also a VR Air Group commander, headed the Budapest squadron, which existed only in its hundred or so personnel—it had no aircraft at all. There were very few missions in those days. An airmail route between Siófok and Szeged was established, as was a standing flight from Szeged to Székesfehérvár.<sup>92</sup> In spite of the desultory pace of flying, losses still occurred. A medical report indicates that Hugó Matzenauer, then the commander of the 5th Squadron, had a hard landing on 14 August that completely destroyed the aeroplane and left Matzenauer sidelined for two months with broken ribs.<sup>93</sup> In mid November there was a return to reconnaissance, air police, and propaganda sorties. A four-ship formation of fighters was dispatched to reconnoitre the city and its environs, monitor the Romanian army's withdrawal, and stand ready to attack in support of the National Army if required. The Romanian pullout complete, the flying corps scattered White leaflets along the capital's main boulevards and accompanied the National Army's procession.<sup>94</sup>

The twenty months from the end of the First World War until the acceptance of the Treaty of Trianon helped shape the Hungarian air force for years to come. Magyar airmen learned that they could rely on their comrades to remain loyal and disciplined, whatever the political orientation of their leaders. They grew in their appreciation for the contributions of air power, but understood its limitations and relationship to ground forces. And they expected that flight operations had to be conducted in spite of austere surroundings and minimal technical support. These lessons, first derived from their experiences in the

---

<sup>92</sup> Czirók, 'A magyar repülőcsapatok', pp. 630-31.

<sup>93</sup> HL HM Eln. 16385/37.-1919.

<sup>94</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 142-3.

Habsburg air service, were subsequently reinforced in the revolutionary period, and would inform operations in 1941-45 as well.

### Chapter 3

#### Evasion: 1920-27

Even as National Army Flying Corps' aeroplanes, each with a black-lettered 'H' painted over the VR's red star, circled the Parliament building during Admiral Horthy's triumphant parade on 16 November 1919, the Hungarian fliers knew its days were numbered. Germany had signed the Treaty of Versailles in June, Austria the Treaty of St Germain-en-Laye in September, and both treaties required the vanquished countries to dismantle their air forces. Hungarian airmen expected to fare no better. Before the terms of the treaty were given—even before a Hungarian delegation had been invited to Paris—the Aviation Department had declared its intention to preserve a national air service in spite of possible legal restrictions. For most of the next decade however, Hungary's military weakness, economic dependency, and diplomatic isolation prevented the airmen from defying the Allies directly. Instead they practiced subterfuge and obfuscation, attempting to disguise prohibited military activity as commercial or sport flight, while at the same time doing all they could to promote the growth of legitimate civilian aviation endeavours. This same pattern of resistance—protest the conditions, then pretend to accept them while working to prevent their implementation—was employed by the army as well as the foreign and finance ministries to minimise the adverse effects of Trianon.

The foundation for resistance to the treaty by Hungarian airmen was laid in a memorandum circulated in late September 1919. This memo contained both analysis and prescription, first describing the anticipated effects of the peace treaty and then offering a proposal to circumvent the air clauses:

After assuming that the Hungarian peace treaty will agree in large measure with the Austrian, we have to count on the complete destruction of Hungarian military aviation (*a magyar aviatika teljes megsemmisítésével*). And this means an even greater loss for the Hungarian National army being formed against the victor states' forces, since everywhere we see the enormous development of aviation as the armed forces' third branch, along with the land and naval forces. The explanation for this large-scale expansion of aviation in the modern armed force lies in the experience of the war, when the flying corps became the army's most important factor, without which not only will the army leaders be practically blind, but the infantry and artillery will also be incapable of accomplishing their missions.

The 37th Section, as Hungarian military aviation's chief responsible directing organisation, wants to fulfil its duty by calling its superiors' attention to the above, because it considers its duty to point out every possibility which could ensure that, if required, the national army would not be forced to do without a flying corps that is properly trained and possesses all appropriate equipment, even if by so doing we should have to account for the evasion of the peace treaty's relevant provisions (*ha ezáltal a békeszerződés idevágó rendelkezéseinek megkerülésével kellene számolnunk*).<sup>1</sup>

With the intention to skirt the treaty established, the author outlined the method. The War Ministry's 37th Section should be officially dissolved, along with the current Civilian Aviation Committee. The successor agency would combine their functions under the Commerce Ministry. The location in the Commerce Ministry was strictly for the Allies' benefit: the new Aviation Committee would in fact be 'one of the War Ministry's organisations, which would be hidden under a civilian dressing gown due to the pressure of the peace treaty's conditions'.<sup>2</sup> This plan was a clear signal that Hungarian airmen remained committed to air power despite the damage caused to the flying corps by the Romanian occupation, and that they rejected in advance the right of the Allies to strip the country of the means to exercise that power.<sup>3</sup>

---

<sup>1</sup> HL HM Eln. 16059/37.-1919.

<sup>2</sup> Ibid.

<sup>3</sup> The Romanians captured nearly 400 aircraft of all types and conditions, along with hundreds of engines and various parts and armaments. The total cost of the aviation equipment lost by Hungary to Romania exceeded 95 million *koronas* (1921 currency). Bernád, 'A Román Királyi Légierő első magyarországi hadjárata', pp. 44-5.

The Chief of Staff accepted the proposal, and therefore the Aviation Department's first step to preserve the air service was to eliminate itself. On 1 February 1920, the 37th Section was abolished and its successor established under the auspices of the Commerce Ministry.<sup>4</sup> Section II Air Transport (*Légiforgalmi szakosztály*) had fifteen personnel, a budget of 1.4 million koronas, and worked from offices in the National Archives building.<sup>5</sup> István Petróczy remained in charge without his military rank.<sup>6</sup> This Air Transport Section functioned as the Hungarian air staff, and its founding order left no doubt that commercial aviation personnel, material and industry would be subordinated to the requirements of national defence.<sup>7</sup>

As if to illustrate that point, the first Hungarian national airline operated along clear military lines. MAEFORT (*Magyar Aeroforgalmi Részvénytársaság*) was created by decree in February 1920, equipped with the remains of the aviation matériel that survived the intervention. Count József Teleki led a survey of the existing stores and tallied their value at twenty million pengős. The government then 'sold' the material (over 800 items, everything from hangars to unfinished fuselages to lubricants) to MAEFORT, which subsequently inflated its worth and publicised its operating capital at fifty million pengős.<sup>8</sup> The airline also received a ten-million-korona subvention from the government. MAEFORT was expected to provide two squadrons of fliers ninety minutes of flight time per month, to obtain and store spare parts sufficient for twenty-five aircraft, to support a training squadron,

---

<sup>4</sup> HL HM Eln. 21.688/37.-1920.

<sup>5</sup> L. Olasz, 'Lépések a honi légvédelem kiépítésére Magyarországon az 1920-as években', *HK*, 122/3 (September 2009), p. 643.

<sup>6</sup> Veszényi, 'A magyar katonai repülés', p. I/28.

<sup>7</sup> HL HM Eln. 16059/37.-1919.

<sup>8</sup> HL HM Eln. 21626a/37.-1919, and Veszényi, 'A magyar katonai repülés', p. I/31.

and to maintain airfields in working order.<sup>9</sup> Since MAEFORT's collection of one- and two-seat former LFT and VR aircraft were not suitable for passenger travel, the airline's first operation was a scheduled airmail service from Budapest to Szeged and Szombathely.<sup>10</sup> To celebrate the initiation of the service, MAEFORT hosted an exhibition at Rákosmező that featured stunt flying, an aerial combat demonstration, and parachute jumping. The air show drew the attention of the country's senior leaders, with Admiral Horthy, Count Pál Teleki and the Archduke Joseph all in attendance.<sup>11</sup> This early attempt at deception ultimately failed. MAEFORT's transparently military organisation and mission could not be hidden from Allied inspectors, who forced the company's dissolution in early December 1921.

The inspectors belonged to the Aeronautical Inter-Allied Commission of Control (AICC), the agency charged with verifying Hungarian compliance with the air clauses of the Treaty of Trianon. Those clauses were as bad as the airmen had feared. The national flying corps was prohibited, and all air service personnel were to be demobilised within two months of the treaty coming into force. All trade and manufacture of aircraft parts of any kind was forbidden for six months. The naval and military clauses were similarly severe. All warships were to be broken up, fleet auxiliary ships disarmed and re-converted to civilian use, and submarines were forbidden for any purpose. Command and control systems did not escape the Allies' notice. They demanded that the high-power wireless transmitter in Budapest was to be used only for commercial ends for a period of three months. Hungary's army was restricted to a volunteer force of 35,000 total personnel, of whom no more than one-twentieth could be officers. Because its mission was restricted to internal security and

---

<sup>9</sup> M.M. Szabó, *A Magyar Királyi Honvéd Légierő, 1938-1945: elméleti-technikai-szervezeti fejlődése és háborús alkalmazása* (Budapest, 1999), pp. 8-9.

<sup>10</sup> L.W.G. Niehorster, *The Royal Hungarian Army, 1920-1945* (Bayside, NY, 1998), p. 55.

<sup>11</sup> T. Révész, *Repülőtér az Alpokalján: A szombathelyi katonai repülőtér története* (Budapest, 2009), p. 94.

border control, the type and size of units and their armaments were specified.<sup>12</sup> These were victors' terms, intended to ensure that the defeated belligerent would not have the capacity to threaten its neighbours.

Nearly identical provisions were included in the treaties with Austria, Bulgaria and Turkey, whose armed forces also were drastically reduced in size and scope. The treaties were unpopular in those countries, but they never became national obsessions as in Hungary. The difference, of course, was in Hungary's massive loss of territory and population to surrounding states. Historic Hungary covered nearly 109,000 square miles; post-Trianon Hungary was one-third that size. More land was ceded to Romania (40,000 square miles) than retained (36,000 square miles). Population changes were only slightly less drastic. From Hungary's 1910 population of 18.2 million people, just 7.6 million remained within its borders as drawn at Trianon. More than three million Magyars found themselves residents of neighbouring, and generally hostile, countries.<sup>13</sup> Budapest's reaction to the treaty was captured by *The Times* on 19 January 1919, the day after the conditions were published: 'Although a hard peace had been foreseen, the severity of the actual terms has astonished not only the general public but also the Prime Minister himself and other public men. The whole city has gone into mourning. Black flags hang from the public buildings.'<sup>14</sup> The

---

<sup>12</sup> *Treaty of Peace Between the Allied and Associated Powers and Hungary and Protocol and Declaration, Signed at Trianon June 4, 1920*, Part V. Military, Naval and Air Clauses. <<http://www.ibiblio.org/hyperwar/ETO/Dip/Trianon.html>> accessed 25 June 2013.

<sup>13</sup> Data from *Magyar Statisztikai Zsebkönyv 1940*, reported in Romsics, *Hungary in 20th Century*, p. 121, and C.A. Macartney, *October Fifteenth: A History of Modern Hungary, 1929-1945, Part I* (Edinburgh, 1957), p. 4. Numbers exclude Croatia-Slavonia.

<sup>14</sup> 'How Hungary Received the Treaty', *The Times* (19 Jan 1920), p. 11, *The Times Digital Archive*, accessed 27 June 2013. Viennese newspapers had reacted strongly against the terms of St Germain seven months earlier, calling the terms 'a crime against mankind' (*Neuer Tag*) suggesting that Austria would become 'a colony of the Entente' (*Mittagszeitung*), but 'to the outward eye Vienna has taken her sentence quietly and with dignity'. See 'Austria Stunned', *The Times* (7 Jun 1919), p. 11, *The Times Digital Archive*, accessed 27 Jun 2013.

signing of the treaty on 4 June 1920 brought a similar response. Hundreds of thousands protested in the streets, shouting ‘*Nem! Nem! Soha!*’ (‘No! No! Never!’), the daily newspapers were printed with black borders, and the national colours were flown at half-mast, where they would remain until 1938.<sup>15</sup> Trianon was a ‘psychological shock... whose terms were unacceptable to all Hungarians regardless of social background or ideological orientation.’<sup>16</sup> One modern study examined Hungarian irredentism through a sociological lens as a cult, and found that, although government and right-wing social groups helped guide the response, ‘the spontaneous reactions of the population should not be underestimated since a great part of the society were personally affected by the loss of territory and of population.’

There were many whose birthplace, relatives, friends, forebears, assets or commercial interests were now on the far side of the new borders, others had treasured personal travel and literary experiences linking them to the lost areas and were embittered by the fate threatening their former compatriots. Some turned against the peace treaty simply because of their patriotism and there were also those who became severe critics of the treaty because of the sober realisation that there would be serious distortions in the world economy and world politics because of the new order. There were practically no Hungarians who approved of the changes. Those few, whose detestation of the counter-revolutionary system was so intense that they objected to any revision of the peace treaty for the benefit of ‘Horthy’s Hungary,’ later and with a more thorough understanding of the situation became critics of the Treaty of Trianon and supporters of its revision.<sup>17</sup>

Revisionism became the animating impulse of the Horthy regime, the ‘fixed point to which every subsequent act of Hungarian international policy was directly related’.<sup>18</sup>

The Horthy era officially began with the Admiral’s election to the regency on 1 March 1920, although as head of the National Army he had wielded considerable influence during

---

<sup>15</sup> Romsics, *Hungary in 20th Century*, p. 124; and B. Cartledge, *The Will to Survive: A History of Hungary* (London, 2006), p. 330.

<sup>16</sup> S.B. Várdy, ‘The Impact of Trianon upon the Hungarian Mind’, in N. Dreisziger (ed.), *Hungary in the Age of Total War (1938-1948)* (New York, 1998), p. 28.

<sup>17</sup> M. Zeidler, *Ideas on Territorial Revision in Hungary, 1920-1945*, trans. T.J. and H. DeKornfeld (Boulder, Co., 2007), p. 186.

<sup>18</sup> Macartney, *October Fifteenth, I*, p. 4.

the transitional Huszár government from November 1919. Law I of 1920, which established Hungary as a kingdom, also set out the means by which the regent (*kormányzó*) was to be elected, and enumerated his powers, which corresponded roughly with those of the president of a republic. Though he was given a fairly free hand in matters of foreign affairs and defence policy, the regent's legislative mandate was rather constrained. He could not, for instance, veto legislation, being permitted instead only to send a bill back to the parliament for reconsideration, nor was his assent required for laws passed by the parliament to come into force. He retained, however, the once-royal prerogative of convoking or dissolving the Assembly, and could appoint or dismiss the prime minister without consulting the legislature. Additionally, it was to the regent as supreme war lord (*legfelsőbb hadúr*) that the troops swore allegiance, and he had authority for the organising, training, and equipping the armed forces within the budgetary limits approved by the parliament.<sup>19</sup>

Horthy's ability to rally the army to his flag proved crucial during Charles IV's second attempt to regain Hungary's crown. Charles' first foray into post-war Hungary had come in the spring of 1921, when he had arrived at Szombathely on Easter Saturday and proceeded to Budapest with an entourage of legitimists. Horthy knew well that the Allies would consider a Habsburg enthronement an act of war, and he managed to convince Charles to return to Switzerland.<sup>20</sup> Prime Minister Count Pál Teleki's ill-advised decision to publish Charles' manifesto caused Horthy to dismiss him and appoint in his place Count István Bethlen, who would hold the position for a decade. In October 1921, Charles sought to exploit the instability surrounding plebiscites in the Burgenland, and tried again to secure

---

<sup>19</sup> Ibid. pp. 49-50.

<sup>20</sup> Secret correspondence with French Prime Minister Aristide Briand had given Charles reason to think otherwise. Romania had apparently declared itself neutral in the matter as well, as long as the terms of Trianon held. Z. Vas, *Horthy* (Budapest, 1981), p. 755. Horthy undoubtedly was correct.

the throne. He avoided border controls by flying into Sopron in a German-piloted Junkers F-13 from the Swiss airline Ad Astra Aero.<sup>21</sup> After landing in a field outside the village of Dénesfa, Charles gathered a growing army of loyalists and marched on the capital, with Colonel Lehár and Count Ostenburg at the head of his forces (Ostenburg's battalion had sworn the traditional Honvéd oath to Charles, apparently after being told that he was responding to a communist uprising in Budapest).<sup>22</sup> Horthy declared martial law and persuaded Lieutenant General Pál Hegedűs, the commander of the Sopron military region who had accepted the leadership of the king's army, to withdraw his support from Charles. With Hegedűs again on the side of the government, the royalist force was substantially weakened, and following a brief battle at Budaörs, Charles agreed to an armistice.<sup>23</sup> Meanwhile, Prague had ordered mobilisation and demanded Hungary's immediate disarmament.<sup>24</sup> After being held under house arrest at the Tihany monastery, Charles and Zita travelled by boat, rail and car through Hungary and Romania to the Black Sea, whence they went into exile on Madeira.<sup>25</sup> With the possibility of a Habsburg restoration now permanently foreclosed, Hungary's position in the region was stabilised. Charles could no longer be used as a bogeyman by Hungary's neighbours, and the legitimist-free elector tensions within conservative Hungarian circles were resolved. Horthy's personal authority

---

<sup>21</sup> *Documents on British Foreign Policy, 1919-1939*, First Series, Volume XXII, No. 460; Junkers type: R. Mulder, 'Magyar Aeroforgalmi Részvény Tarsaság - MAEFORT (1920-1921) and Magyar Légiforgalmi Részvény Tarsaság - MALERT (1922-1945)', <[http://www.europeanairlines.no/wp-content/uploads/2010/06/A\\_Maefort\\_Malert\\_020209.pdf](http://www.europeanairlines.no/wp-content/uploads/2010/06/A_Maefort_Malert_020209.pdf)> accessed 12 Sep. 2013.

<sup>22</sup> T. Sakmyster, *Hungary's Admiral on Horseback* (Boulder, Co., 1994), pp. 112-13.

<sup>23</sup> The government's force at Budaörs was led by Capt Gyula Gömbös, who in addition to his duties as an officer, was a member of parliament, and more importantly, the president of the Hungarian Association of National Defence (*Magyaros Országos Véderő Egyesülete*), one of the burgeoning far-right organisations. Lt Gen Hegedűs was stripped of his rank and honours for his role in the uprising.

<sup>24</sup> *DBFP*, Ser. 1, Vol. 22, Nos. 412, 473, 501, 506.

<sup>25</sup> *Ibid.* Nos. 423, 473, 501, 506.

was also enhanced by the failure of the coup. For the 99 per cent of the population who desired a king, the regent was now the best and most authentic alternative.<sup>26</sup>

Charles' decision to initiate the royal putsch by air is revealing. He clearly recognised the abundant advantages of air transport, and he judged the risks of flight worth running. The incident also points out the necessity and difficulty of controlling national airspace. The Soviet Republic had earlier come to a similar conclusion regarding the efficacy of personal air travel. In May 1919, VR pilot István Dobos carried Tibor Szamuely, one of Kun's most trusted and ruthless lieutenants, from Budapest to Kiev to lobby for Ukrainian intervention against Romania. Szamuely's mission failed, but the seven-hundred-mile flight over the Carpathians in the Brandenburg C-I was widely celebrated.<sup>27</sup> Admiral Horthy, too, had experienced the power of arriving personally by air. In the early days of the Szeged counter-revolution, Horthy flew to Siófok, not yet firmly under the control of his forces. 'The mere sight of the eagle feather on the cap of my aide-de-camp,' he wrote, 'indicating his status as an officer in the National Army, sufficed to make the Bolsheviks turn their heels.' Elsewhere in his memoirs, Horthy described how a leaflet drop from the White forces' only aircraft caused a 'fully equipped squadron of hussars' to defect.<sup>28</sup> Naval aerial reconnaissance had also contributed to Horthy's signature victory over the Italians at Otranto in 1917.<sup>29</sup> The Regent was slow to embrace new ideas, and so these examples of air power had not yet made their full impression. He would eventually emerge as an energetic supporter of the cause of Hungarian aviation, declaring 'We were a riding nation—we will

---

<sup>26</sup> *DBFP*, Ser. 1, Vol. 12, No. 231. This was the assessment of a British diplomat, Mr Athelstan-Johnson.

<sup>27</sup> Csizmarik, 'Magyar Tanácsköztársaság Légierije', p. 379.

<sup>28</sup> N. Horthy, *Memoirs* (New York, 1957), pp. 100, 103.

<sup>29</sup> Csonkaréti and Sárhidai, *Osztrák-Magyar tengerészeti repülői*, p. 54.

become a flying nation' (*Lovas nemzet voltunk—repülőnemzet leszünk*). In the late 1930s his son István would be the country's most prominent airman.<sup>30</sup>

While the major political figures in Hungary and abroad were occupied with great affairs of state, Hungarian staff officers and Entente disarmament inspectors were engaged in a game of cat-and-mouse. The initial attempts to circumvent Trianon's air clauses have already been described: the Aviation Department went underground, a clandestine air staff was formed, and two squadrons were disguised as an airline. Hungary insisted that enforcement of the disarmament clauses could not begin until the treaty was ratified by parliament, which took place only on 26 June 1921. In the period from signing to ratification, the Magyar military establishment carried on business as usual whenever possible. The army increased its intake in the intervening months, squirreling away recruits against the coming winter.<sup>31</sup> The General Staff (*Vezérkarfőnökség*, VKF), dissolved under the Károlyi government and subsequently proscribed under Trianon, was briefly re-established from August 1920, and its officers openly wore the distinctive branch badges.<sup>32</sup> In September, the VKF, noting that 'aviation is becoming a factor of more considerable importance every day,' added two airmen to the General Staff, a military aviation representative and his executive deputy.<sup>33</sup> After the treaty came into force, Hungarian airmen initiated 'Action E', a deliberate attempt to shuffle aircraft around the country to shield them from the Allies. Perhaps thirty-five machines were saved in this way. Nevertheless, Aeronautical Commission inspectors discovered and destroyed 119

---

<sup>30</sup> Szabó, *MKHL 1938-1945*, p. 2.

<sup>31</sup> *DBFP*, Ser. 1, Vol. 12, Nos. 307-8.

<sup>32</sup> *DBFP*, Ser. 1, Vol. 12, No. 260. After ratification, the general staff would be prohibited under Art 105, 'All other organisations [than those permitted for divisions] for the command of troops or for preparation for war are forbidden.'

<sup>33</sup> Szabó, *MKHL 1938-1945*, p. 9.

aeroplanes, 77 aircraft motors, and some quantity of specialised production equipment not included in the peace treaty's terms. (In Austria, which had more aircraft to begin with and did not experience the wastage of an additional war and occupation, 1,333 aircraft and 3,289 motors were destroyed.)<sup>34</sup> Aeroplanes being difficult to hide, the Commission had good success in unearthing hardware; rooting out illicit organisations was substantially more challenging. Since the shadow air staff in the Commerce Ministry had so far gone unmolested, the government asked Colonel Petróczy to expand the small cadre into a covert air service. Designated Section XI (Air Transport), Petróczy's organisation consisted of nearly a hundred experienced pilots. The airmen were scattered to work in different government ministries, but ultimately reported to Section XI.

Petróczy had in July 1921 undertaken an intensive three-week research trip to Germany to study its airmen's organisational reaction to defeat. The itinerary included the German Transportation Ministry, the Aviation Science Association, aero club headquarters, and major airline offices. He had also intended to participate in the Rhön gliding competition, but it was postponed due to inclement weather. The rapid German conversion from military to civilian aviation deeply impressed Petróczy, who reported that 'German aviation, between the harsh current conditions and the pressures of the Versailles peace, has reached a degree of development which is exemplary even compared to the Entente'.<sup>35</sup> In contrast, he thought Hungary's present situation matched that of pre-war Austria, and that no time could be wasted in establishing domestic aviation: 'Here is the last hour in which we can create those basic conditions without which aviation cannot develop. During the time of prohibition forced on us by the peace treaty in which we cannot fly, we have to create further

---

<sup>34</sup> Révész, *Repülőtér az Alpokalján*, p. 96.

<sup>35</sup> I. Petróczy, 'A legyőzött Németország aviatikája. Tanulságok és teendők' (1921), Hadtörténelmi Intézet Könyvtára (HIK) 5271, p. I/3.

opportunities, by increasing propaganda activities, establishing schools and courses, and organising social and economic associations.’<sup>36</sup> Petróczy consciously modelled aspects of his plan on the German experience, particularly the use of civilian flying as a vehicle for the preservation and future development of military aviation. That was the method employed by the pioneer aviator August Euler, who in 1919 was appointed to lead the Reich Aviation Office, an agency that maintained the ‘incestuous’ ties between Luft Hansa and the Reichswehr.<sup>37</sup> Like his German counterpart, Petróczy believed air power was essential for national revival and that its cultivation was a multi-generational undertaking. ‘I turn to our youth,’ he wrote, ‘because Hungary’s future greatness depends on them. I will awaken the interest in aviation in every beautiful and impressionable spirit. I will convince them of the tremendous importance of aviation to our country’s reconstruction, and that without its development, a broken-winged Hungary will fall behind the other peoples of the world’.<sup>38</sup>

Although Petróczy had taken close notice of Euler’s bureaucratic initiatives, he apparently missed the operational analysis commissioned by Colonel General Hans von Seeckt. Von Seeckt, the commander-in-chief of the Weimar Reichswehr from 1920 until 1926, believed it ‘absolutely necessary to put the experience of the war in a broad light, and to collect this experience while the impressions won on the battlefield are still fresh’.<sup>39</sup> To that end, in December 1919 he ordered a comprehensive study of the war, directing fifty-seven committees to consider how pre-war expectations had borne out, how German forces had responded to unforeseen situations, how the fielding of new weapons had been

---

<sup>36</sup> Ibid. pp. I/4-5.

<sup>37</sup> E.L. Homze, *Arming the Luftwaffe: The Reich Air Ministry and the German Aircraft Industry, 1919-39* (Lincoln, Ne., 1976), pp. 11-12. Like Petróczy, Euler earned his country’s first pilot licence. See his obituary, *The Times* (3 Jul 1957), p. 12.

<sup>38</sup> Petróczy, ‘A legyőzött Németország aviatikája’, p. V/20.

<sup>39</sup> Quoted in J.S. Corum, *The Luftwaffe: Creating the Operational Air War, 1918-1940* (Lawrence, Kan., 1997), p. 59.

managed, and which new problems that arose in the war remained unaddressed.<sup>40</sup> Nearly five hundred officers ultimately contributed to the effort, out of which grew a new German army doctrine. In a related effort, the head of the Air Service led a study of the air war initially focused on organisation, tactics, and technology. The project eventually involved 130 senior airmen, most of them combat commanders or general staff officers, and its scope broadened to include all aspects of aerial warfare. Their self-critical reports formed the basis for Army Regulation 487, *Leadership and Battle with Combined Arms*.<sup>41</sup> There was no Hungarian equivalent to this service-level debrief. Professional military historians published academic articles, and staff officers hustled to preserve men and matériel from Allied inspectors, but each tribe remained on its own reservation. There was no systematic evaluation of operational effectiveness conducted with the intent of incorporation into future doctrine. In the next decade, Hungarian airmen would engage in vigorous theoretical debates about the role and efficacy of air power, but a critical opportunity to improve the Honvéd's effectiveness in a manner not prohibited by Trianon had been missed. It must be mentioned that other countries did not follow Von Seeckt's example either. While most governments published official histories of the war and a few visionary strategists garnered enthusiastic reviews (Billy Mitchell, Basil Liddell Hart, Giulio Douhet), no force other than the Reichswehr subjected itself to such a rigorous examination.

The Aeronautical Commission reported in the spring of 1922 to the Ambassadors' Conference that Trianon's Article 132 requirements for turning over aviation matériel had been fulfilled. On 5 April, the Commission was withdrawn.<sup>42</sup> The end of the AICC did not

---

<sup>40</sup> Ibid.

<sup>41</sup> J.S. Corum and R.R. Muller, *The Luftwaffe's Way of War: German Air Force Doctrine, 1911-1945* (Baltimore, 1998), p. 72.

<sup>42</sup> *DBFP*, Ser. 1, Vol. 24, No. 181.

mean the end of Entente oversight of Hungarian aviation. The Allies extended Article 131's six-month moratorium on the manufacture and import of aircraft and equipment for an additional six months, and in order to enforce the Article 128 prohibition on the establishment of military air forces, they left behind an aeronautical inspector seconded to the Inter-Allied Military Commission of Control.<sup>43</sup> From the beginning of the IMCC's mission until its termination in 1927, Hungarian authorities worked diligently to undermine the Commission and impede its progress. The Hungarian campaign was inventive and thorough, if not always effective, and the efforts to frustrate inspectors were not confined to warehouses, barracks or airfields. The first line of attack was economic: the Commission's expenses, including billeting and salaries, were borne by the defeated country, and the Hungarian government pressed relentlessly for reductions in the size of the inspector force.<sup>44</sup> The press was cooperative in this undertaking. *Pesti Hírlap* decried the 'outrageous wages paid to the members of the Commission which has long terminated its work and remains on the for its own convenience.'<sup>45</sup> Magyar protestations on this front eventually wore the Entente down, and from 1924 the costs of operating the Commission were deducted from the reparations account. Still, the papers ridiculed the luxurious lifestyles the stipends afforded. Budapest's legation in Rome pointed out that the IMCC's senior officer, an Italian general, was paid more than Admiral Horthy. When some wives of French members were killed in a car crash, 'the tragedy was used to mock the high number of vehicles used by the French delegation.'<sup>46</sup> Social isolation was another tool employed against the monitors. The Hungarian representative to the Commission, Colonel Richárd Rapaich, learned the names

---

<sup>43</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 146.

<sup>44</sup> B. Juhász, 'The Inter-Allied Military Commission of Control and the Military Control of Hungary between 1921 and 1927', *Hadtudományi Szemle*, 5/1 (2012), pp. 50-1, 59n.

<sup>45</sup> *DBFP*, Ser. 1, Vol. 27, No. 13.

<sup>46</sup> B. Juhász, 'Military Control of Hungary', pp. 50-1, 59n.

of Hungarian officers likely to be issued social invitations by the Allied members and quietly instructed them to shun the inspectors in public.<sup>47</sup>

From the moment the Commission teams left their dwellings (first-class hotels for the officers), interference was the order of the day. Surprise inspections were permitted but rarely achieved. Convoys were followed to the outskirts of Budapest by bicycle-mounted scouts before having their destination confirmed by roadside observers. After the inspection location was ascertained, *csendőr* (gendarme) checkpoints delayed officials' arrival until evidence of illicit activity could be hidden. If the inspection were to take place at an airfield, the gate guards would hold the Commission outside the field until the station commander approved their entry. The station commander would invariably be hard to find at short notice; while the guards were desperately searching for him, engineering staff would make operable aircraft appear to be useless spares, and then those personnel in excess of authorisation would disappear. The station commander could then turn up, make the appropriate apologies, and welcome the inspectors to his airfield. When a surprise inspection did come off smoothly, Commission personnel faced the possibility of angry crowds awaiting their departure. The mob always seemed to be better informed than the police, who tended to show up a bit late.<sup>48</sup> On at least one occasion, shots were fired at the French delegation, injuring the driver (almost certainly a Hungarian national). The government refused to apologise for the attack, a position the Foreign Office thought 'characteristic of their whole attitude towards military control.'<sup>49</sup>

One series of incidents did lead to an apology from Count Bethlen, and to the sacking of a defence minister. In December 1922, Allied inspectors had been denied permission to

---

<sup>47</sup> Ibid. p. 57.

<sup>48</sup> Ibid. p. 59.

<sup>49</sup> *DBFP*, Ser. 1, Vol. 27, No. 13.

search a hut on the premises of a barracks they believed held a stash of rifles. The confrontation occurred in full view of the public and was widely reported in the press as a defeat for the IMCC. The following month, 'representatives of the commission discovered 300 carbines and 33,000 rounds of ammunition in the house of a retired colonel of the regular army in Budapest. The explanations furnished by the Hungarian Minister of Defence were described by the commission as puerile, and the tone of the two letters he has addressed to them on the subject have been defiant and truculent.'<sup>50</sup> The situation nearly repeated itself in late March. Allied inspectors were searching a house in the garrison town of Kecskemét, and again they were denied access to a storage building. The inspectors could see long wooden crates in the shed through the door, and their interpreter overheard members of the crowd boast that they would not allow a single weapon to be seized. Nevertheless, the Hungarian army officer who showed up in mufti refused to open the gate without orders from his superiors. Meanwhile the local police declined to control the crowd, whose attitude 'became more and more menacing.' The Allied officers suspected the mob was largely composed of members of the irredentist group Awakening Hungarians (*Ébredő Magyarok Egyesülete*). When after nearly an hour the inspectors gave up and began to make their way 'with great difficulty' back to their vehicles, the crowd pelted their cars with stones, breaking windows. The inspectors escaped unharmed but furious.<sup>51</sup> After the Commission filed a formal complaint, the Hungarian government handed out 'grossly inadequate punishments'. The Foreign Office informed Budapest's chargé d'affaires that 'His Majesty's Government were seriously displeased at the incident.'<sup>52</sup> When this failed to bring about more than vague expressions of regret, the British minister in Budapest

---

<sup>50</sup> *DBFP*, Ser. 1, Vol. 24, No. 362.

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

repeatedly addressed the issue with Bethlen, who promised to look into the matter further. Only when threatened with the loss of the loans he had secured in London did Bethlen take action. He asked for the Belitska's resignation, and appointed in his place Count Károlyi Csáky. That Bethlen was willing to ignore the Allied demands for apology and redress until faced with losing the western financial infusion demonstrates the contempt the Control Commission engendered even at the top levels of government.

In spite of the constant obstruction, the IMCC did manage to limit Hungary's rearmament. Through its monitoring regime a number of illegal arms caches were discovered, most notably at the Kistétény and Hajmáskér weapons depots, and the Hungarian attempt to build an army reserve by shaving the minimum enlistment periods was slowed. A handful of secretly imported aeroplanes were seized, but some para-military flight schools survived.<sup>53</sup> And although the Commission was hampered by its small size and a fluctuating degree of motivation (high when a French officer was in charge, less so when an Italian commanded), it at the very least imposed an opportunity cost on Hungarian rearmament. Magyar military officials spent considerable amounts of money and effort trying to evade Trianon's sanctions. Without the Commission, all of those resources could have been poured directly into personnel, arms and training.

Not all of the airmen's intellectual energy was expended in obstruction. The 1923 opening of the French-Romanian airline CIDNA was not an event expected to further the cause of Hungarian air power, but Magyar officers were able to use it to their advantage. The interest of air transport safety, they reasoned, demanded a high-altitude meteorological reconnaissance capability, and the best platform for that mission was the British Bristol F2B. Somewhat surprisingly, the Entente agreed with this thinking and approved the purchase of

---

<sup>53</sup> B. Juhász, 'Military Control of Hungary', pp. 55-64.

two aircraft. The importer's request for 'spare parts' was also approved, and under that name he was able to buy four additional machines, complete with state-of-the-art 300-horsepower Hispano-Suiza engines. These aircraft were maintained at the Székesfehérvár-Sóstó workshops, the best-equipped maintenance facility in Hungary. The Székesfehérvár machinery had come from Szeged, where it had been quarantined under French occupation, and therefore had not been available for use by the revolutionary government. It was, however, protected from confiscation by Romanian troops, and the plant in its new location far from the frontiers was used for manufacturing and repair.<sup>54</sup>

Planning for a post-inspection future carried on as well. In anticipation of the Entente lifting the aerial sanctions, Petróczy forwarded to Prime Minister Bethlen a proposal for the development of a twenty-eight-squadron air force under the cover of a commercial aviation agency. No action was taken until July 1923, when Sándor Belitska, still at that time the defence minister, raised the issue in a ministerial council meeting. Belitska reminded his colleagues that

'according to accepted opinion, in a future war, aerial combat will have a large influence on the outcome...our neighbours, the successor states, have made extraordinary efforts in this direction, such that they have built their armed forces to the maximum extent possible. For us, there is only one path: under the guise of civil aviation, as much as circumstances permit, we must be ready, so that when the opportunity arises, we may move into military aviation quickly and without a hitch.'<sup>55</sup>

Belitska's argument carried the day, and the council approved the creation of the Aviation Bureau (*Légügyi Hivatal*, LÜH), which opened for business in April 1924. Like Section XI, LÜH appeared to be an element of the Commerce Ministry, but was wholly

---

<sup>54</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 159-64.

<sup>55</sup> Quoted in Szabó, *MKHL, 1938-1945*, pp. 9-10, and Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 146. At the time the combined air forces of the Little Entente numbered over 400 aircraft; paltry by First World War standards, but a formidable threat against a country with no combat planes readily available. Olasz, 'Lépések a honi légvédelem kiépítésére', p. 672.

directed by the Defence Ministry. Through such subterfuge Belitska was able to show to Allied inspectors an organisation whose nominal strength was twenty, but which in reality numbered nearly two hundred personnel, including seventy-four officers.<sup>56</sup> The defence minister's statement is a nearly perfect distillation of Hungarian (and German) air policy in the years of forced disarmament. It contains three of the essential components: certainty about the importance of air power in coming conflicts, concern about potential enemies' air forces, and the commitment to build an air service in spite of international agreements otherwise. The only missing piece was an exhortation to revanchism, support of which would have been assumed and therefore its open expression unnecessary.

Commercial aviation was important not only as a blind for the air force, but also as an engine of economic growth and as a link with the world outside the former Habsburg lands. After MAEFORT was shuttered by the Aeronautical Commission in December 1921, the establishment of a new national airline became a high priority for the government. MALERT (*Magyar Légiforgalmi Részvénytársaság*) was formed in November 1922, and began a daily service to Vienna in July 1923.<sup>57</sup> The end of the import ban meant that MALERT could purchase new aircraft from abroad, and the Vienna flights were conducted in Dutch Fokker F-IIIs, which could carry five passengers in a fully enclosed cabin.<sup>58</sup> A German-financed competitor, Hungarian Aero Express, sprang up in early 1923 and also flew the Budapest-Vienna route. Aero Express pioneered river-based pleasure flights over the capital, launching float-equipped Junker F-13s from the Danube and flying to and from

---

<sup>56</sup> M.M. Szabó, *A Magyar Királyi Honvéd Légierő a második világháborúban* (Budapest, 1987), p. 15, and *MKHL, 1938-1945*, p. 10. Date for LÜH: Révész, *Repülőtér az Alpokalján*, p. 97.

<sup>57</sup> R.E.G. Davies, *A History of the World's Airlines* (London, 1964), p. 26.

<sup>58</sup> 'The Fokker F III Commercial Monoplane', *Flight*, 26 May 1921, pp. 355-6, <<http://www.flightglobal.com/pdfarchive/view/1921/1921%20-%200355.html>> accessed 5 Aug. 2013

Lake Balaton.<sup>59</sup> In the years 1923-25, the two companies received equal subsidies from the LÜH (600 million koronas each total), but the merger of Junkers Luftverkehr and Deutscher Aero Lloyd into Luft Hansa caused the Bethlen government to worry about excessive German control of Hungarian aviation, and in 1926 the Aero Express subvention ended.<sup>60</sup> The company was dissolved that same year, which left MALERT alone in the market and without competition for government support. The decision to favour MALERT over Aero Express was based on the prospects of future military necessity, not business efficiency. Aero Express had been more effective than MALERT, and had been a member of the Trans-Europa Union, a consortium of German, Swiss and Austrian airlines that provided regular service along the route Geneva-Zurich-Munich-Vienna-Budapest.<sup>61</sup>

Trans-Europa had been founded by the German aircraft giant Junkers primarily as a means to develop markets for its aeroplanes, which it hoped would be operated by subsidiary airlines around the world. Negotiation of contracts with the southern European partners had been left to Erhard Milch, a former Luftstreitkräfte fighter squadron commander turned Junkers executive, who would later be named director of Luft Hansa and eventually a Luftwaffe field marshal.<sup>62</sup> Milch's career trajectory, like the general development of European aviation in the inter-war period, was shaped to a large degree by the First World War treaties.<sup>63</sup> The phenomenon, although unexpected, is in retrospect completely reasonable. The victors, nearly as exhausted as the vanquished, were left with

---

<sup>59</sup> P. Moys, 'Légiforgalmi irányításunk története (1920-1945)', p. 2, <[http://iranyitokepzes.hungarocontrol.hu/download/hungarocontrol\\_a-legiforgalmi-iranyitas-tortenete.pdf](http://iranyitokepzes.hungarocontrol.hu/download/hungarocontrol_a-legiforgalmi-iranyitas-tortenete.pdf)> accessed 6 Aug. 2013.

<sup>60</sup> Subsidies: HL HM Eln. 16606/6.k-1927.

<sup>61</sup> Trans-Europa line: Davies, *History of the World's Airlines*, p. 26.

<sup>62</sup> D. Irving, *The Rise and Fall of the Luftwaffe: The Life of Field Marshal Erhard Milch* (Boston, 1973), p. 15.

<sup>63</sup> Davies, *History of the World's Airlines*, p. 21.

vast stockpiles of military matériel, including aircraft and engines. After securing peace in the palace halls, the people of the Allied nations lost interest in war and its implements, and aviation enthusiasts commenced beating swords into ploughshares. Cheap surplus aircraft proved a windfall for individual pilots, spawning the age of barnstorming, but ultimately the ready availability of parts, especially 1918-vintage engines, retarded technological progress.<sup>64</sup> In the defeated countries the situation was almost completely reversed. The professional core of their armed forces chafed under forced disarmament, political leaders sought to restore national respect, and significant elements (in Hungary nearly the entire country) pressed relentlessly for revision. Destruction of the defeated powers' aviation stocks forced airmen in those countries to start with fresh designs rather than adapting older military airframes to civilian purposes. This was an unintended boon, especially to Germany, which retained its sources of raw materials and manufacturing centres in the post-war settlements. Germany also 'benefited from the remarkable air-mindedness of the German people', who were willing to subsidise national aviation through subscriptions and donation drives, as they had demonstrated during the Zeppelin craze of the early 1900s.<sup>65</sup> With broad popular support, high levels of technological sophistication, and capable leadership, the German aviation industry was able to thrive despite Versailles' strictures, Weimar's chaos, and astronomical levels of inflation.<sup>66</sup>

Hungary lacked Germany's broad industrial base and deep financial pockets, and its aircraft-manufacturing sector was not able to capitalise on the opportunity of the clean slate. Separated from the Fischamend Arsenal and Škoda Works by imperial dissolution and the natural resources of Transylvania by treaty, the post-Trianon Hungarian aviation industry

---

<sup>64</sup> R. Dick and D. Patterson, *Aviation Century: The Golden Age* (Ontario, 2004), p. 51.

<sup>65</sup> Davies, *History of the World's Airlines*, p. 21.

<sup>66</sup> Homze, *Arming the Luftwaffe*, p. 11.

operated at a severe disadvantage. Nevertheless, domestic production resumed after the expiration of Article 131. In November 1922, Section XI solicited bids for a new training aircraft. The public tender stipulated that the new aeroplane must conform to the Ambassadors' Conference regulations, but the participating companies were informed secretly that the machine should be capable of being retro-fitted with a more powerful engine for future military use.<sup>67</sup> Four designs were submitted and two prototypes requested, although it seems only the design from György Szebeny ever took flight. Szebeny was a former Fischamend engineer familiar with the metal construction techniques of Fokker and Junkers, and his plan was for a metal-skinned, high-wing monoplane with side-by-side seating. The development was plagued with problems. Appropriate metal sheeting could only be obtained from Germany, and in order to save money and reduce production time (Hungarian aircraft builders having very little experience with metal skin), Section XI decided on traditional wood and fabric construction.

The next major change involved the power plant. Jenő Fejes had promised a lightweight radial engine capable of 100 horsepower, but in tests at the end of January 1923 it was unable to lift the Szebeny machine (registration code H-MAAC) into the air. A Mercedes engine had to be fitted, and to reduce drag the fuselage was narrowed and seating changed to tandem.<sup>68</sup> Test flight reports showed that even with its increased output and reduced profile, the aircraft would barely climb above 200 feet. A new propeller improved performance, and the aeroplane made a series of short flights to airfields around Budapest in late February.

---

<sup>67</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 152. Single-seat planes with engines producing more than sixty horsepower were considered military aircraft, as were 'machines that can fly without a pilot', those with 'any form or armour or protection or with fittings to take any form of armament', and those whose capabilities exceeded the following: maximum ceiling 13,000 feet; useful load 1,300 lbs, including crew; speed 105 mph. *DBFP*, Ser. 1, Vol. 26, No. 901.

<sup>68</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 152-55.

After the fitting of a thinner wing in March 1923, H-MAAC managed to reach 1,000 feet.<sup>69</sup> It had in the meantime been presented to MALERT, its supposed purchaser, for inspection. In the middle of April, Szebeny's aeroplane climbed to 2,000 feet, but by that time Section XI had given up on it for military use. At the same time, a modified prototype of one of the rejected designs had been constructed. Test pilot Antal Fehér took Kocsárd Jánky, Chief of the General Staff, for a successful flight in H-MAAB, Béla Oravec's parasol-winged adaptation of the UFAG C-I. With Jánky's enthusiastic support, and following a László Háy test flight, Section XI ordered the Oravec model for the new flying school being established at Szombathely.<sup>70</sup>

Military flight training was conducted there using MALERT as a front, with expenses filed on fake invoices printed with the company letterhead.<sup>71</sup> Once the danger from Allied inspectors passed, the MALERT directors began to worry about the integrity of their accounts to creditors, prompting a letter to Defence Minister Csáky requesting written acknowledgement of the airline's relationship with the Defence Ministry. 'In view of the fact that these secret instructions are only verbal,' the letter ran, 'major responsibility rests on the company's directors in the event that if for some reason the books are called into question. In light of this, we request that Your Excellency provide a secret transcript to our company for the accountants'. Csáky provided the requested memorandum.<sup>72</sup>

The tribulations and ultimate failure of the Szebeny-Fejes design sapped the air service's confidence in domestic production and forced the resignation of Colonel Petróczy. He had insisted that the Hungarian aviation industry was capable of independent production, but he

---

<sup>69</sup> A. Fehér, 'Berepülő pilóta naplója, 1915-1927', Magyar Műszaki és Közlekedési Múzeum (MMKM) 988.

<sup>70</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 152-9.

<sup>71</sup> Veszényi, 'A magyar katonai repülés', p. II/44.

<sup>72</sup> HL HM Eln. 16606 6.k-1927.

had underestimated both the extent of German and Austrian involvement in earlier Magyar manufacturing, and the effect of the three-year-long enforced suspension. Furthermore, it was suspected that his indiscretion about the tender had drawn the attention of the IMCC. Petróczy was replaced on 18 May 1923 by Colonel Károly Vassel, a non-flying officer of the general staff. Vassel shared the concern of many of the service's pilots about the quality of the domestic aircraft, but he did not oppose the VKF chief's decision to order Oravec's high-wing trainer.<sup>73</sup> By the end of 1924, Lieutenant Colonel Waldémar Kenese's flight school at Szombathely operated six Oravec machines, along with the modified Szebeny prototype (even a poor design was too valuable to waste) and a Brandenburg B I.<sup>74</sup> Nearly a hundred pilots learned to fly at Szombathely in the Oravec aeroplanes, but after a pair of fatal crashes in September and October 1925 related to flight control and wing failures, the school withdrew the remainder from service and destroyed them. Thus ended the Hungarian experiment in aerial autarky. There would be further attempts to build indigenous designs, but never with the hope that domestic manufacture could fill the country's entire need.<sup>75</sup> The thirty-three grounded student pilots were sent to Budapest for a four-month academic course that included instruction in tactics, weapons, radio familiarity, aerial photography, air defence, meteorology and aerial law.<sup>76</sup> The Aviation Bureau then dispatched officers to Austria, Britain and Germany to search for suitable aircraft for import. Their efforts paid off: five Bristol School and five Udet 12a trainers were delivered to Szombathely by summer 1926. The Manfréd Weiss factory on Csepel Island began producing the Udet aircraft under

---

<sup>73</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 146-58.

<sup>74</sup> Kenese, in 1920 a captain in the Vienna office charged with liquidating LFT assets, had been instrumental in arranging the delivery to Szombathely of eight Phönix C-Is purchased in Austria by István Bethlen. Révész, *Repülőter az Alpokalján*, p. 93.

<sup>75</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 146, 158.

<sup>76</sup> Vesztényi, 'Magyar katonai repülés', p. II/52.

licence in 1927.<sup>77</sup> Pilot training and flight time more than doubled after the arrival of the Bristols and Udets, with total hours increasing from fewer than 1,600 in 1925 to over 3,700 in 1927.<sup>78</sup>

The LÜH's turn to imported aircraft and licensed production might have created long-term problems for the Hungarian aviation industry, but it was a victory for Hungarian statecraft, which had sought since 1918 to re-integrate Hungary into European commercial and diplomatic life. Early isolation as a defeated power had been followed by quarantine behind the cordon sanitaire that protected the West from the contagion of communism. Still, the Soviet Republic's collapse did little to improve Hungary's international position.

Anticipating the rise of treaty revisionism in Hungary, Czech foreign minister Eduard Beneš (Hungary's *bête noire*) had begun to form an alliance to hem in the Magyar state. In August 1920, Czechoslovakia and Yugoslavia signed a treaty of mutual defence against Hungary, and spurred by fears of Habsburg restoration, Bucharest joined the alliance through bilateral treaties with Prague and Belgrade in 1921. The Little Entente had the full backing of Paris, which had resumed its anti-Magyar orientation after an apparent thaw in Franco-Hungarian relations in 1920 proved illusory.<sup>79</sup> Relations with Austria remained strained after the Burgenland dispute, and Italian rapprochement with both Yugoslavia and Czechoslovakia had closed the door, at least momentarily, to Rome. Weimar Germany was hostile to the

---

<sup>77</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, 160-2.

<sup>78</sup> Vesztyényi, 'Magyar katonai repülés', p. II/53.

<sup>79</sup> In the last months before the conclusion of the Trianon treaty, French negotiator Maurice Paléologue had offered hope for speedy border adjustments in Hungary's favour in exchange for sweeping economic concessions. Britain and Italy opposed the French initiative, which they contended would violate the treaty's terms, and they warned Budapest that Paléologue's promises would likely be repudiated by the French government in any case. As expected, the secret negotiations became public and amounted to nothing except public disappointment in Hungary. See S.D. Kertesz, *Diplomacy in a Whirlpool: Hungary between Nazi Germany and Soviet Russia* (Notre Dame, In., 1953), pp. 21-23.

counter-revolutionary Horthy government, which itself was implacably opposed to the Soviet Union. Talks aimed at diplomatic recognition and trade agreements with the Soviets had begun in 1922 and recommenced in 1924, but they fell apart in 1925 after Admiral Horthy became aware of the previously secret negotiations. Hungary's only friend in the early 1920s was Poland, with whom it had shared monarchs in the past, and to whom it offered military support in the 1920 Russo-Polish war.<sup>80</sup> The economic situation was no less dire. Foreign investment had dried up, loans were hard to come by, inflation was on the rise, and Trianon had disrupted historic trading patterns and levied reparations.

Prime Minister Bethlen recognised the debilitating weakness of Hungary's international position, and he knew that financial assistance could only follow the breaking of the diplomatic impasse. In his first speech as prime minister, Bethlen declared that his government's first task was 'the raising of the foreign policy horizon of the nation', and Foreign Minister Miklós Bánffy submitted Hungary's application to join the League of Nations soon after.<sup>81</sup> The Little Entente countries opposed Hungary's accession, as expected, but opposition also came from hard-line Trianon rejectionists within the country, who considered it an implicit endorsement of the hated treaty. The government pointed out that Trianon had already been signed once, and that by joining the League Hungary incurred no additional obligation. Moreover, the Covenant allowed for revisiting accords that threatened peace, and thus could pave the way for peaceful revision. Domestic objections were finally ignored, but international resistance proved harder. Czechoslovakia tried to attach specific reparations requirements to the admission, but after a motion by Poland,

---

<sup>80</sup> Hungarian aid to Poland was opposed by the countries of the Little Entente, although some sixty million rifle cartridges made their way from Csepel munitions factories to Poland via Romania. Gy. Juhász, *Hungarian Foreign Policy 1919-1945*, trans. S. Simon and M. Kovács (Budapest, 1979), pp. 55-7.

<sup>81</sup> Quoted in Gy. Juhász, *Hungarian Foreign Policy*, p. 60.

Hungary was admitted to the League. For a defeated power, admission to the League amounted to a 'political rehabilitation' that allowed the new member to stand as an equal, at least formally under international law, with the victors.<sup>82</sup> Hungary planned to use that legal equality to address its reparations obligations, improve its financial situation, and loosen Allied military control.

The Finance Ministry attacked the reparations requirements in much the same way that the Defence Ministry had undermined the inspection regime. After having unsuccessfully objected to the institution of reparations, the Hungarian government allowed inflation to rise unchecked as a way of decreasing the value of its currency, and therefore reducing the burden of debt and reparations on Hungarian industry. Bethlen and Finance Minister Tibor Kállay then made the rounds of Western capitals, arguing that Hungary would be forced to default unless it received foreign loans.<sup>83</sup> They secured 307 million gold koronas, somewhat less than half what had been solicited, at a rate of 7.5 per cent. The money, although intended strictly for reparations, was also used to fund the government's operating budget and to bring the deliberate inflation under control. This cash injection, along with reductions in government spending and increased tax revenues, allowed Hungary to end 1925 with its accounts in surplus. Hungarian financial stability fed international confidence, which led to dramatically increased private investment in the country, allowing strong growth through the rest of the decade until the onset of the Great Depression in 1929.<sup>84</sup>

Hungary wasted no time in confronting the issue of the Inter-Allied Military Control Commission. The day after joining the League of Nations, its representative petitioned to have League members assume responsibility for the inspection mission. The Ambassadors'

---

<sup>82</sup> Ibid.

<sup>83</sup> Cartledge, *Will to Survive*, p. 341.

<sup>84</sup> Romsics, *Hungary in 20th Century*, p. 132. Britain stood as guarantor for 50% of the loan.

Council prevailed on the League to decline the request, but Hungary had made its point regarding disparate treatment under international law and had served notice that it intended to use the League to further its own purposes.<sup>85</sup> Hungary opened a new front in its war against the IMCC: day-to-day tactical harassment of the inspectors was joined by a long-term strategic campaign to subvert the Commission's authority. Hungarian emissaries worked to convert the standing permanent Commissions into ad hoc bodies called by the League Council to investigate possible treaty violations or threats to peace, and they strove to include the minor defeated powers and neutral countries as often as possible, while excluding the members of the Little Entente.<sup>86</sup> This diplomatic offensive was underway at the same time that military officials in Hungary were busy thwarting the Commission's work at every turn. Petty persecution of inspectors has been described, but in one case an entire article of the military clauses was ignored. Article 115 required the consolidation of all munitions production in a single, government-owned factory, which was to be located at Csepel, an island in the Danube south of Budapest. After months of inaction, the IMCC brought the issue to the government's attention in December 1921. The government did not respond until October 1922, when it informed the Commission that construction was beginning at the new site. Consolidation of the Diósgyőr cannon factory, the Frommer small arms works, and the Balatonfűzfő powder plant were to be completed by the end of 1923, but late that year War Minister Károly Csáky asked the IMCC to consider instead a virtual consolidation, since actual consolidation would be too expensive. Later, the Finance Ministry appealed to have the costs deducted from the reparations requirement.<sup>87</sup> The government continued to stall, and skilfully exploited the strength of its own public support

---

<sup>85</sup> B. Juhász, 'Military Control of Hungary', p. 63.

<sup>86</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 78.

<sup>87</sup> B. Juhász, 'Military Control of Hungary', p. 53.

and the weakening will of some members of the Commission. The British minister to Budapest captured this dynamic in a cable to the foreign secretary in January 1925:

I have received your dispatch...in which you express concern at the attitude of calculated obstruction which the Hungarian Government are displaying towards the Inter-Allied Military Commission of Control in Hungary and request my views as to what possible measures of effective pressure might be taken to induce the Hungarian Government to adopt a more conciliatory attitude. I have had the question constantly in mind since my arrival here in July last and it has been evident to me from the first that the problem is not an easy one. On the one hand there is the stubborn obstinacy of the Hungarian Government, or rather Military Authorities, who have the weight of public opinion behind them, in non-compliance with the demands of the Conference of Ambassadors, and on the other the Allied Powers are under obligation to enforce the military Clauses of the Treaty of Trianon. The difficulty lies in the mode of enforcement of the will of the Powers. Military sanctions are out of the question, for the reason that they could only be applied by Hungary's neighbours, which would raise a storm here the consequences of which cannot be foreseen. And financial pressure, if too severe, might undo the good economic work already accomplished under the League of Nation's reconstruction scheme.<sup>88</sup>

In the end, the Hungarian stonewalling worked, and although it remained a contentious issue, munitions production was never centralised. The League's final decisions on the IMCC accorded fairly well with Hungary's wishes, although the degree to which credit should be given to Hungarian diplomats is unclear. Interested states (including the defeated and their antagonistic neighbours) were not invited to participate in the Council's debates, which concluded that permanent military control ought to be phased out in favour of periodic inspections ordered by the Council. In a disappointing turn, it was determined that Committee members would be drawn from all the League's states, and could include neighbouring countries.<sup>89</sup> The Ambassadors' Conference officially ended the IMCC's mission in Hungary on 31 March 1927, and the last inspectors were withdrawn at the end of May.<sup>90</sup>

---

<sup>88</sup> *DBFP*, Ser. 1, Vol. 27, No. 29.

<sup>89</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 78.

<sup>90</sup> B. Juhász, 'Military Control of Hungary', p. 67.

Admission to the League of Nations hardly improved Hungary's relations with the Little Entente. Budapest generally declined to deal with the other capitals, preferring instead to fuel discontent among the national minorities of the 'artificial' states—Magyars in the first place, but also Slovaks, Ruthenes and Croats. Bethlen and Beneš shared a deep distrust of each other's motives and had no desire for cooperation. The situation was similar in the southeast. 'Hungary never seriously considered rapprochement with Romania: the mutual dislike between the two peoples was too acute, the numbers of Magyars in Transylvania too large, the possibilities of local revision too nearly non-existent.'<sup>91</sup> Since it was in Hungary's interest to chip away at the solidarity of the Little Entente, and no common ground could be found for negotiation with Czechoslovakia or Romania, Bethlen made overtures to Yugoslavia. The opening for negotiations came after the embarrassing disclosure of Hungarian support of Croat separatists emboldened Belgrade to press Budapest for arbitration of outstanding disputes. Despite being a member of the Little Entente and enjoying the patronage of the West, Yugoslavia had prickly relations with its neighbours and was jostling with Italy for ascendancy in the Adriatic. Easing tensions with Hungary over the Bánát and its inhabitants would strengthen Yugoslavia's hand in all its other disputes. Low-level consultations between the two countries proceeded through the summer of 1926, and in August the Regent supported reconciliation during his speech commemorating the 400th anniversary of the battle of Mohács.<sup>92</sup> He praised the 'good friend' who had in the past joined Hungary in mutual defence, and bemoaned the recent and unfortunate adversarial relationship. 'I believe and hope', Horthy said, 'that soon we can reinstate the old friendship

---

<sup>91</sup> Macartney, *October Fifteenth, I*, p. 84.

<sup>92</sup> On 29 Aug 1526, the Ottoman Turks under Suleiman the Great defeated the Hungarian army of King Louis II (who was himself killed in the battle). The defeat led to a century and a half of Turkish occupation and to the assumption of the Habsburgs to the Hungarian crown.

and understanding.<sup>93</sup> A deal seemed imminent, but the two sides could not agree on what sort of deal it would be. Hungary, whose primary goal was the disruption of the Little Entente, wanted a declaration of neutrality in conflicts with a third party, while Yugoslavia sought a treaty of non-aggression that would not violate its agreements with Czechoslovakia and Romania. Foreign Ministers Lajos Walkó and Momčilo Ninčić met in Geneva in September 1926 to begin high-level negotiations, but the bilateral talks ultimately went nowhere, because Italy, which had earlier blessed the initiative, abruptly withdrew its support.<sup>94</sup>

Although Italy and Yugoslavia had signed the Rapallo Treaty in 1920 and a friendship and cooperation accord in 1924, the situation between them remained fractious. The tension increased as Benito Mussolini, in power since 1922, gained confidence and exercised more control over Italian foreign policy. In the years immediately following the war, the Italian orientation had been pro-Little Entente, and a pact with Czechoslovakia had followed the 1924 treaty with Yugoslavia. But Mussolini soon came to believe that the degree of French influence in central and south-eastern Europe was incompatible with his vision of Italian supremacy in the region, and began to build a bloc to oppose the Little Entente. The new alliance was to be called the Quadruplice, and its members were to include Hungary, Romania, and Bulgaria—all, of course, under Italy's leadership. Ultimately, Mussolini was not able to reconcile the differences between Romania and Hungary over Transylvania, and between Romania and Bulgaria over Dobruja, so the planned four-way pact was cut in

---

<sup>93</sup> Quoted in M. Fülöp and P. Sipos, *Magyarország külpolitikája a XX. században* (Budapest, 1998), p. 146.

<sup>94</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 77, 81.

half.<sup>95</sup> Bethlen met with Mussolini in Rome in early April 1927. The meeting went very well, and on 5 April they signed the Treaty of Friendship, Conciliation and Arbitration. Perhaps the most interesting text of the short, five-article treaty is in the preamble, which notes ‘the concordance of numerous interests common to both nations’.<sup>96</sup> Numerous they were: besides their common hostility toward the Little Entente and its French patron, both leaders were committed to treaty revision and shared an intense aversion to and suspicion of the Soviet Union.<sup>97</sup> Hungary and Italy also saw eye-to-eye on Germany. Both countries were concerned about its potential resurgence and the implications for their own freedom of manoeuvre, while at the same time recognising the need to harness German industrial might to their revanchist schemes. Gaining German assistance while avoiding German mastery would bedevil Hungarian and Italian leaders for most of the next decade.

In the early summer of 1927, however, things were turning up roses for Hungary’s leaders. Thanks to foreign loans and investment accompanied by domestic austerity, the country’s accounts were in the black. Allied military inspectors, whose work Magyar officials had tried to hobble at every turn, had ended their mission in March. The treaty with Rome was a double victory, as it both provided Hungary with an ally among the major Western powers and denied the same to the Little Entente. Finally, in late June the British press baron Lord Rothermere began a propaganda campaign on Hungary’s behalf in his paper, the *Daily Mail*. Earlier in the year at Paris, the four Allied powers—France, Great Britain, Italy and Japan—had rescinded the restrictions on Hungarian production of civilian aircraft, although manufacture of military aeroplanes still was forbidden.

---

<sup>95</sup> H.J. Burgwyn, *Italian Foreign Policy in the Interwar Period: 1918-1940* (London, 1997), pp. 37-40.

<sup>96</sup> *Treaty of Friendship, Conciliation and Arbitration between Hungary and Italy, signed at Rome, 5 April 1927*. <<http://ungarisches-institut.de/dokumente/pdf/19270405-1.pdf>> accessed 13 July 2013.

<sup>97</sup> Burgwyn, *Italian Foreign Policy*, pp. 37-40.

Magyar military leaders welcomed this progress. Senior officers had protected some of their critical personnel and staff organisations from the Control Commissions, but recruiting had diminished, and the limitations of Hungarian aircraft industry had been made clear. There was hope, however. A later classified protocol to the Italian agreement pledged 300 million pengős in weapons credits, which meant that Hungarian rearmament could now begin in earnest, if still in secret. The air service had survived treaty restrictions, Allied inspectors, reparative confiscation, and rampant inflation. Its next years would be no less challenging. Military aviation around the world had advanced very little since the end of the First World War, but that lull was over. The pace of innovation in doctrine and technology was beginning to accelerate, and it would not slow down until the end of the Second World War. Could Hungarian military aviation adapt in time to the changing conditions?

## Chapter 4

Theory: 1927-37

The termination of the Inter-Allied Commission of Control mission in March 1927 meant that Hungarian rearmament was possible, though not formally permitted. Trianon's military restrictions remained in place, but the instrument for their implementation was removed, and the Allies' will for enforcement greatly diminished. By securing an Italian treaty and British loans, Hungarian diplomats and financiers had gained for its political and military leaders a narrow slice of manoeuvring room in which to pursue Hungary's *idée fixe*, the nullification of the post-war settlement. Central to that pursuit was rebuilding Hungary's armed forces. There was broad agreement throughout the government that the possession of a credible military establishment was a necessary, if insufficient, condition for revision. A disarmed Hungary would never regain the territories lost at Trianon. A reconstituted Honvéd, however, would strengthen Hungary's hand in the region in the short term and provide the means for forced revision in the long run. Defence Minister Károly Csáky summarised this argument in a 1927 crown council meeting: 'In foreign policy it is military strength above all that defines power...The stronger our military forces, the more in demand will be our friendship. This is one reason why our forces cannot remain at their present standard.'<sup>1</sup> A year earlier, in a resignation letter to Admiral Horthy (which the Regent declined to accept), Count Bethlen had given similar counsel. After offering his assessment that the 'foundations of financial and political consolidation have been laid', Bethlen advised Horthy 'the next step should be to shake off military control and to build up armaments'. He closed the letter on an optimistic note: 'It is my feeling that in about four or

---

<sup>1</sup> Quoted in Szabó, *MKHL, 1938-1945*, pp. 10-11.

five years Trianon might be liquidated. For this time all our forces will have to be kept ready, and every preparation must be made by then.’<sup>2</sup> While Bethlen’s predicted timeline of revision was off by nearly a decade, his call for rearmament was heeded as soon as conditions permitted.

There was no doubt that an air service would be an important part of Hungarian rearmament. Though the contribution of air power to the battles of 1919 had been limited by scarce resources, expectations for aviation’s potential contribution to warfare had grown in the 1920s, and by the end of the decade, there was support for (or fear of) air power at the highest levels of Hungarian government. Brigadier General Henrik Werth, then the commandant of the war college (Hadiakadémia) and later Honvéd Chief of Staff, considered the air arm ‘modern warfare’s most powerful’.<sup>3</sup> Retired Colonel Károly Mayer-Csejkovits, a well-known commentator on military affairs, sent to Admiral Horthy in March 1928 a memorandum titled ‘The strategical position of Hungary in the war of the future’. This future war, according to the colonel, would be one of ‘panic, disorders, and mass movements’ induced by gas and incendiary attacks on civilian populations from the air. Curiously, Mayer-Csejkovits did not recommend to the Regent a multi-layered air defence system, but rather he outlined measures that could be taken to discipline and control the population. Although there is no record that Horthy took seriously his suggestion to form a national fire-fighting corps as a substitute for compulsory military service, it is clear that the Regent shared both the colonel’s appreciation for the aeroplane as a potent instrument of war and his dread of chemical attack. Horthy’s notes on the memo included his observation

---

<sup>2</sup> *The Confidential Papers of Admiral Horthy* (Budapest, 1968), p. 42. Bethlen’s resignation letter was triggered by the outrage in foreign capitals, particularly Paris, following the revelation of government involvement in a scheme to counterfeit large quantities of French francs.

<sup>3</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 14.

that mobilisation was impossible ‘when Yugoslavia and Czechoslovakia dispose over 1000 aircraft’, and ended with an ominous refrain: ‘Aircraft, gas, aircraft, gas, aircraft, gas.’<sup>4</sup>

The fear of massed formations of aeroplanes attacking with chemical weapons was common in Europe during the 1920s, stoked by popular depictions of future air war. Budapest had been spared aerial bombardment in the First World War, and Hungarian-language publications about air combat had to that time centred on personal accounts of wartime exploits. One Hungarian airman, László Madarász (née Hauser—Madarász means bird-catcher) did expand his memoirs into a second volume that addressed broader themes of aerial warfare, but his conclusions in *Aviators’ Tactics* were quite conventional.<sup>5</sup> Madarász endorsed observation as an air service’s first and most important role, contending that reconnaissance was ‘a war-preventing activity, though when it turns to action, it has a deciding influence.’<sup>6</sup> He conceded that armed aeroplanes had become distinct instruments of war with their own characteristics that separated them from land or sea operations, but he did not advocate independent bombing campaigns.<sup>7</sup>

It is possible that the source of Horthy’s apprehension could be found in Britain, where prominent politicians, in and out of government, discussed the most recent developments in aviation, and ‘the annual Commons debate on the defence budget served as a regular catalyst for dire proclamations about the menace of air warfare.’<sup>8</sup> Among the most influential proclamations were those issued by J.F.C. Fuller and B.H. Liddell Hart. In his 1923 *Reformation of War*, Fuller envisioned repeated gas attacks against enemy cities, and Liddell

---

<sup>4</sup> *Confidential Papers of Admiral Horthy*, pp. 45-9.

<sup>5</sup> Hauser: Veszényi, ‘A magyar katonai repülés’, p. 1/24.

<sup>6</sup> L. Madarász, *Légi háború: A repülőök harcászata* (Budapest, 1928), p. 51.

<sup>7</sup> *Ibid.* p. 3.

<sup>8</sup> T.D. Biddle, *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing, 1914-1945* (Princeton, 2002), p. 104.

Hart's 1925 *Paris, or the Future of War* suggested that urban populations, when subjected to sustained aerial bombardment, would rise in revolution.<sup>9</sup> Whether absorbed directly or at second hand, these fears are evident in the Mayer-Csejkovits memo and in Horthy's reaction. Their concerns were widely shared after 1931, when the works of Giulio Douhet, the Italian general and champion of air power, became available in Hungarian.

Douhet had begun writing about the utility of air power in 1910, and from the beginning he had preached the value of *domino dell'aria* (command of the air). In his early work, Douhet objected to targeting civilians on grounds of morality and effectiveness, calling it a 'useless and savage act'.<sup>10</sup> By the second year of the war, influenced by H.G. Wells' fiction and the reality of German planes ranging over France, Douhet began to embrace unrestricted air warfare.<sup>11</sup> In 1915 he advocated the formation of a force of 500 bombers to strike 'the most vital, most vulnerable and least protected points of the enemy's territory'.<sup>12</sup> After Italy entered the war, Douhet served at the front as the chief of staff of the Fifth Infantry division and then in the Carnia Zone. There his observations turned to pointed criticism. With little concern for professional decorum, he repeatedly attacked Italian leaders for their inept employment of air power. Eventually his correspondence with members of the government came to the attention of the high command, and in September 1916 he was convicted of 'issuing false news...divulging information differing from the official communiqués...diminishing the prestige and the faith in the country and of disturbing the

---

<sup>9</sup> Ibid.

<sup>10</sup> Quoted in T. Hippler, 'Democracy and War in the Strategic Thought of Giulio Douhet' in H. Strachan and S. Scheipers (eds.) *The Changing Character of War* (Oxford, 2011), p. 171.

<sup>11</sup> Ibid.

<sup>12</sup> Quoted in P.S. Meilinger, 'Giulio Douhet and the Origins of Airpower Theory', in P.S. Meilinger (ed.), *The Paths of Heaven: The Evolution of Airpower Theory* (Maxwell AFB, Ala., 1997), pp. 4-5.

public tranquillity'.<sup>13</sup> He served one year in prison and was released on the day the battle of Caporetto began. After being recalled to active service in early 1918, he was named to head the Central Bureau of Aviation, which post he held until his retirement at the end of the war. The 1916 conviction was overturned in 1920, and in 1921 he was promoted to the rank of General.<sup>14</sup> That same year Douhet published *The Command of the Air* with War Ministry approval, and he later joined Mussolini's first cabinet as Under-Secretary for Air.<sup>15</sup> Douhet's loud insistence that the air force grow at the expense of the other arms quickly alienated army and navy leaders, and they persuaded Mussolini to remove him from office.<sup>16</sup>

*The Command of the Air* was Douhet's best-known work, and remains 'the most eloquent, elaborate, and comprehensive theory of air power in the interwar period'.<sup>17</sup> In the two editions of *Command* and in the pages of *Rivista Aeronautica*, Douhet laid out a complete theory of war. He argued that 1) modern warfare erased the distinction between combatants and non-combatants; 2) surface forces could no longer take the offensive; 3) successful defence against a determined aerial offensive was impossible; 4) nations must therefore launch massive bombing attacks against the enemy; and 5) this required an independent air force equipped with long-range bombers.<sup>18</sup> In his book *The War of 19\_\_*, Douhet further developed these themes, postulating a conflict between opposing sides

---

<sup>13</sup> Ibid.

<sup>14</sup> 'General Giulio Douhet: An Italian Apostle of Air Power', *Royal Air Force Quarterly*, 7 (1936), p. 148.

<sup>15</sup> Meilinger, 'Giulio Douhet', p. 8.

<sup>16</sup> J. Gooch, *Mussolini and his Generals: The Armed Forces and Fascist Foreign Policy, 1922-1940* (Cambridge, 2007), p. 59.

<sup>17</sup> J.S. Corum, *The Luftwaffe: Creating the Operational Air War, 1918-1940* (Lawrence, Kansas, 1997), p. 89. In 'Giulio Douhet and the Origins of Airpower Theory' Meilinger notes that the 1921 version of *Command of the Air* elicited a 'muted' response, while the second edition published in 1927, with an even greater emphasis on independent air forces received a 'noisy' reception. He attributes the difference to earlier war weariness and the increased militarism of fascist Italy.

<sup>18</sup> D. MacIsaac, 'Voices from the Central Blue: Theorists of Air Power', in P. Paret (ed.), *Makers of Modern Strategy from Machiavelli to the Nuclear Age* (Princeton, 1986), p. 630.

having radically different views of air power. The German air force represented Douhetian purity; the Franco-Belgian alliance clung with outmoded allegiance to surface forces and relegated its air force to a supporting role. The folly of the old approach was apparent after the decisive three-hour air battle that left all of France and Belgium open to uncontested aerial bombardment. Long before the Franco-Belgian forces could mobilise their formidable armour divisions, the German air force had directly targeted their national wills, rendering irrelevant the massive allied advantage in ground troops. Nearly a decade before the Luftwaffe's defeat in the Battle of Britain proved otherwise, Douhet's contention that air attack had no effective defence was not unreasonable and was shared by many political leaders and professional airmen across Europe and America.

One of the professional airmen who embraced Douhet was Captain Ferenc Szentnémedy, who was in 1931 an instructor at the Hadiakadémia, the aviation editor of the military journal *Magyar Katonai Szemle*, and his country's foremost 'apostle of Douhetism'.<sup>19</sup> Szentnémedy was of Swabian origin, born Ferenc Willwerth in 1896 in Orsova, a predominantly German town in the Bánát.<sup>20</sup> He entered the imperial army as a subaltern in the 5th Infantry Regiment on 1 August 1914, and remained with that unit until July 1917, when he joined the Luftfahrtruppen's Flik 32 as an aerial observer. Szentnémedy finished the war with Flik 35, and like many of his comrades, he fought under the Kun government in the Vörös Repülőcsapat before serving in the new National Army's flying corps. From 1919 until 1923 Szentnémedy worked as an adjutant and earned his pilot's

---

<sup>19</sup> Holló, *Galambtól a Griffmadárig*, p. 55.

<sup>20</sup> Willwerth, 1896: S. Szakály, *A magyar katonai felső vezetés, 1938-1945* (Budapest, 2001), pp. 128-9; Orsova: 1890 census data from Hungarian Wikipedia <<http://hu.wikipedia.org/wiki/Orsova>>. accessed 14 Nov. 2013. Improbably, Orsova (1890 population: 3,564) produced another prominent military airman: Luftwaffe General der Flieger Stefan Frölich, who served in the Austrian national air service after the dissolution of the Empire.

rating.<sup>21</sup> His duty performance must have been exemplary, because he was one of a dozen officers selected in 1923 to attend the Hadiakadémia, which was disguised at the time as the Budapest Regulation Review Course.<sup>22</sup> Among the regulations presumably not reviewed in the course was Trianon's Article 111, which prohibited military schools for purposes other than officer accession.<sup>23</sup> After graduating and earning the right to append 'general staff officer' (*vezérkari szolgálatot*) to his rank, Captain Szentnémedy, who had also been awarded the honorific *vitész* (valiant), served a tour with an infantry brigade, followed by a year as a section director on the Légügyi Hivatal. In 1928 he returned to the Hadiakadémia as an instructor, and there began his career as a military intellectual and air power theorist.<sup>24</sup>

Szentnémedy's assignment coincided with a major curriculum revision at the Hadiakadémia. In the academic year beginning in the autumn of 1929, war college students began to study economics, law, and intelligence and espionage. They also were the first Hadiakadémia class to have a course on aviation, *Repüléstan* having replaced *Tengerészstan* (naval studies) at the same time. Welcome as this change must have been for Hungarian airmen, there could have been some disappointment in the restricted scope of the early air operations syllabus, which represented the 'field aviation' point of view espoused by László Madarász. The course emphasised reconnaissance and local air defence at the expense of bombardment, and aviation was treated as a branch of the army. Academically, aerial operation instruction was given the same weight as that covering artillery, army organisation, and technological familiarisation. Practical training in aeronautics was also introduced, although it, too, tended to reinforce a limited conception of air power: between

---

<sup>21</sup> Szakály, *Magyar katonai felső vezetés*, pp. 128-9.

<sup>22</sup> K. Kálmán, *A magyar vezérkari tisztek kiképzése és továbbképzése az 1920-1944 közötti években* (Budapest, 1992), p. 11.

<sup>23</sup> *Treaty of Trianon*, Part V. Military, Naval and Air Clauses.

<sup>24</sup> Szakály, *Magyar katonai felső vezetés*, pp. 128-9.

the first and second years, each student attended a four-week aerial observer's course at Székesfehérvár.<sup>25</sup>

These innovations occurred under the leadership of General Henrik Werth. Werth had been sent to examine the German war college before his appointment as the Hadiakadémia commandant, and his changes reflected current German practice, so much so that one historian, himself a Hadiakadémia graduate, considered the school under Werth '100 per cent German'. 'Strategic education', he elaborated, 'basically and essentially moved along a German line. Clausewitz's military philosophy formed the frame, his work *On War* was the Bible, and merely quoting from it made arguments and reasoning acceptable to the general staff.'<sup>26</sup> In this deployment of Clausewitz to shut down discussion, the Hungarians joined the hordes of western staff officers before and since who apparently cannot resist the temptation to pluck from the Prussian's voluminous writings a quote that seems to support precisely the position being advanced. In any case, Hungarian exposure to *On War* long predated Werth's tenure at the Hadiakadémia. The first Magyar translation was printed at the Ludovika military academy in 1892 and was reissued in 1917. The translator, retired colonel Baron Samu Hazai, considered *On War* a work of 'lasting value' (*örökbecsű*), and wanted to make it accessible to those Hungarians who did not read German. In the preface to the second edition, Hazai suggested that Clausewitz had continued relevance, and lamented that the lessons of *On War* had not been taken to heart:

I think that few people read it. That is unfortunate, because if they had studied it, it would have been possible to understand better the nature of the current great world war. Now I can say what I said in the preface to the first edition: that the trouble of translating this study will be useful, especially useful in these times when for many years we will be concerned with events and studies of the great world war.<sup>27</sup>

<sup>25</sup> Kálmán, *Magyar vezérkari tisztek kiképzése*, pp. 44, 39.

<sup>26</sup> *Ibid.* pp. 27, 13, 28.

<sup>27</sup> S. Hazai, 'Előszó', in K. Clausewitz, *A Háborúról*, trans. S. Hazai (Budapest, 1917), pp. 1-2.

Certainly Szentnémedy was influenced by his reading of *A Háborúról*, and he on occasion appealed explicitly to the authority of the ‘great German soldier-philosopher’.<sup>28</sup>

It was Douhet, however, who had the most profound impact on Szentnémedy, and it was through the popularisation of Douhet’s work that Szentnémedy himself became the most important figure in the development of Hungarian air power thought. From the first issue of *Magyar Katonai Szemle* in January 1931 until his last article a decade later, Szentnémedy set the terms of the discussion. That was partly due to his prolific output: through his final submission in May 1941, Szentnémedy had written more than a quarter of the four hundred articles related to aviation that appeared in the journal. Because his pieces tended to be lengthy, his share of the total *MKSz* page count ran to nearly 40 per cent. These numbers should not suggest that Szentnémedy avoided airing others’ views. He appears to have relished argument, publishing with great regularity articles that took exception to his own entries. Instead of diminishing his importance, the running debate in *MKSz* between Szentnémedy and his critics only heightened Szentnémedy’s authority. His status as the preeminent Hungarian aviation expert was furthered by the broad range of his reporting, the majority of which consisted of analysis of foreign aerial manoeuvres and technological advances. With his ability to read German, English, Italian and Romanian, he was able to keep *MKSz* readers (which should have included all serving officers, since subscription to the journal was mandatory) informed on the more mundane developments in international aviation.<sup>29</sup> His most impassioned articles, however, and the ones that generated controversy

---

<sup>28</sup> See below. F. Szentnémedy, *A repülés*, (Budapest, 1933), p. 27.

<sup>29</sup> Language skill: Szakály, *Magyar katonai felső vezetés*, pp. 128-9; *MKSz* mandatory: T. Hetés, ‘Gondolatok a magyar hadtörténet-felfogás alakulásáról’, *HK* 16/2 (1969), p. 329.

and stimulated dispute, invariably involved advocacy for the decisive role of air power in a future war.

That was the theme of his contribution to the inaugural edition of *Magyar Katonai Szemle*, ‘The guiding principles, instruments, and possibilities of independent air warfare’, which was followed two issues later by his translation of *The War of 19\_\_*. From March to June 1931, *MKSz* featured Douhet’s ‘hypothetical conflict among the great powers in the near future’.<sup>30</sup> *The War of 19\_\_* was originally published in the Italian air ministry’s journal *Rivista Aeronautica* shortly after Douhet’s death in February 1930, and was his last will and testament, his final vision of total war waged through the air with the aim of destroying the enemy’s resolve. Szentnémedy found this vision quite compelling, calling it ‘an outstanding...work in which he demonstrates, from practical examples with undeniably convincing force, that it is the mass employment of air forces that led to the war’s conclusion.’<sup>31</sup>

This appears to be the first appearance of Douhet in the Hungarian language, although Szentnémedy assumed on the part of his reader some knowledge of the Italian general. He referred to Douhet as the ‘noted aviation expert’ (*ismert nevű repülő-szakiró*) and to his having died suddenly, but he did not mention specifically any of Douhet’s earlier works.<sup>32</sup> It is possible that Douhet had been discussed informally at the Hadiakadémia or in a presentation at the National Officers’ Club, which periodically hosted events for professional development. Despite his knowledge of Italian, Szentnémedy translated *The War of 19\_\_* from German, the source for his abridgement being a complete version

---

<sup>30</sup> G. Douhet, *The Command of the Air*, trans D. Ferrari (New York, 1942; reprint Washington D.C., 1983), p. 294.

<sup>31</sup> F. Szentnémedy, ‘Vélemények és eszmék Douhet “Az 19.. évi háború” című tanulmánya kapcsán’, *MKSz*, 7 /1931, p. 102.

<sup>32</sup> F. Szentnémedy, ‘Az 19.. évi háboru’, *MKSz*, 3/1931, p. 29.

published in the monthly aviation journal *Die Luftwacht*.<sup>33</sup> Szentnémedy abbreviated Douhet's forty-thousand word monograph to roughly one-third, spreading approximately 13,000 words over four issues of *MKSz*, adding to the July issue his 5,000-word 'Opinions and Thoughts'. In keeping with his characterisation of Douhet's work as 'practical', Szentnémedy chose to retain in his articles the extensive lists of aircraft types and capabilities, along with detailed timings of the successive attack waves, at the expense of the rather lengthy excerpts of imaginary doctrine and staff memoranda. This decision, while understandable in context, is unfortunate, since it is through these rhetorical devices that Douhet expressed most clearly the competing visions of air power's utility.

Although the fictional German air force clearly manifested Douhet's own vision, his description of the two camps remains compelling because he treated them, and therefore his reader, with intellectual honesty. The viewpoints might be exaggerated, but they did not descend into caricature. Douhet's Franco-Belgian pre-war doctrine, portrayed as fatally flawed, was not depicted as ridiculous and indeed has internal logical consistency. It was, as one expert characterised the performance of the real Armée de l'air in World War II, 'neither decadent, nor stupid, nor treasonous'.<sup>34</sup> The fundamental assumptions were simply wrong:

Because these two powers were victorious in the World War, they were led to perfect the armaments and systems of war which gave them the victory then, systems and armaments which experience had proved satisfactory. Consequently, the war doctrine they held to, which was reflected in the organisation, instruction, and education of their armed forces, did not much differ from the one which had taken shape during the World War...

This doctrine taught that the aim of war was the destruction of the enemy's land forces; and therefore gave to the army the position of greatest importance as the most suitable and reliable instrument for accomplishing this aim...

---

<sup>33</sup> Ibid.

<sup>34</sup> A.C. Cain, 'Neither Decadent, nor Stupid, nor Treasonous', Ph.D. diss. (Ohio State University, 2000), p. 1.

All the experience of the World War had been brought to bear to give their land armed forces the maximum offensive power in order to destroy as quickly as possible the enemy's land forces by a war of movement.<sup>35</sup>

Douhet's German military planners had fought in the same war as their Franco-Belgian antagonists, but being possessed of different national goals, culture, and constraints, drew contrary conclusions. These conclusions were indeed those of Douhet himself, presented in the form of a memo from General Reuss, the fictitious Chief of the General Staff (not included in Szentnémedy's abridgement, although presumably present in the complete *Luftwacht* article):

It is not in the armed forces of the enemy but in the nation itself that the will and capacity to make war is found. Warfare must therefore be waged against the people, to break their will and destroy their capacity to make war...

The aerial arm makes it feasible to strike directly at the heart of the enemy, striking at all his interior activities without land and sea armed forces...

For a decision in the air, it is only necessary to put the people themselves in an intolerable condition of life through aerial offensives...

By integrating the aerial arm with poison gas, it is possible today to employ very effective actions against the most vital and vulnerable spots of the enemy—that is, against his most important political, industrial, commercial, and other centres, in order to create among his population a lowering of moral resistance so deep as to destroy the determination of the people to continue the war.<sup>36</sup>

Szentnémedy approached the question of chemical warfare pragmatically. He translated without further discussion Douhet's passages concerning the development of the German chemical industry and the employment of poison gas bombs along with high explosives and incendiaries.<sup>37</sup> Given his obvious high regard for Douhet's ideas, one can assume Szentnémedy accepted without reservation the Italian's argument that 'all nations will prepare for aero-chemical warfare, and in case of war all of them will be ready to wage aero-

---

<sup>35</sup> Douhet, *Command of the Air*, p. 298.

<sup>36</sup> Ibid. pp. 305-6.

<sup>37</sup> Szentnémedy, 'Az 19.. évi háború', *MKSz* 3/1931, p. 33; and *MKSz* 4/1931, p. 102.

chemical war.<sup>38</sup> In the same way, Szentnémedy's lack of comment on Douhet's basic notion of direct aerial attack against the enemy's will should be seen as a validation of that position. Although Szentnémedy did not offer explicit endorsement of the efficacy of strategic bombing, his effusive praise for Douhet and his characterisation of Douhet's contributions to air power offered proof of his allegiance. 'It is undeniable,' Szentnémedy wrote, 'that his analysis in the first place influenced domestic aviation; however we can claim this too, that the organisational development of practically all the European powers' air forces bears the stamp of Douhet's thought.'<sup>39</sup>

It was true that Douhet's ideas found fertile ground in air ministries around the world, but in no country, not even his own, was his conception of air warfare adopted completely. In Italy, the flamboyant air minister Italo Balbo was closely associated with the fascist favourite Douhet, and routinely employed Douhetian language in public and in budget battles with the army and navy, but the Regia Aeronautica (RA) did not develop along strict Douhetian lines. Balbo was also influenced by the arguments of Amadeo Mecozzi, Douhet's main Italian opponent and a serving RA officer. Mecozzi agreed with Douhet's insistence on aerial autonomy, but rejected outright the bombing of civilian populations, calling it 'war against the unarmed'.<sup>40</sup> Instead, Mecozzi espoused a theory of three-service cooperation that he called *guerra aerea concomitante*.<sup>41</sup> Balbo and the RA vacillated between the ideas of Douhet, which suited both their ideological and bureaucratic prejudices, and those of Mecozzi, which were convincing but did little to advance the RA's agenda. The Regia

---

<sup>38</sup> Douhet, *Command of the Air*, p. 309.

<sup>39</sup> Szentnémedy, 'Vélemények és eszmék', p. 102.

<sup>40</sup> Quoted in J.S. Corum, 'Airpower Thought in Continental Europe between the Wars', in P.S. Meilinger (ed.), *The Paths of Heaven: The Evolution of Airpower Theory* (Maxwell AFB, Ala., 1997), p. 161.

<sup>41</sup> Gooch, *Mussolini and his Generals*, p. 105.

Aeronautica continued to hedge between the competing theories, and never trained or equipped itself to execute either concept sufficiently. Italian bomber aircraft did not attain the required payload, range or armament to carry out Douhet's unrestricted aerial warfare, and the brief experiment with a heavy ground attack fighter was not sustained.<sup>42</sup>

The idea of strategic bombing found its most effective crusaders in the United States and Great Britain, though in neither country did its campaigners acknowledge a debt to Douhet. In the case of Britain, it is indeed likely that Sir Hugh Trenchard was not aware of Douhet's work, and that Trenchard's zeal for long-range bombing was based on his own wartime experiences and post-war British studies. The earliest mention of Douhet in the English press seems to be an unsigned article in the April 1933 issue of *Royal Air Force Quarterly*, and this late appearance led one historian to conclude 'it seems quite clear that Douhet had no influence in the forming of British airpower theory.'<sup>43</sup> Another researcher, however, noting marked similarities between Douhet and J.F.C. Fuller, claimed an indirect Douhetian influence on RAF doctrine.<sup>44</sup> The link between Douhet and General Billy Mitchell, the public face of air power advocacy in America, was less ambiguous. The two men met in Europe in 1922, and that same year the Italian air attaché in Washington published an *Aviation* magazine article about *The Command of the Air*. Furthermore, a translation of excerpts from *The Command of the Air* appeared in the files of the US air service in 1923. A full translation of the work was not available until 1933.<sup>45</sup>

---

<sup>42</sup> M. Knox, *Hitler's Italian Allies: Royal Armed Forces, Fascist Regime, and the War of 1940-1943* (Cambridge, 2000), p. 64; and Corum, 'Airpower Thought in Continental Europe', p. 161.

<sup>43</sup> 1933 RAF Quarterly: Meilinger, 'Giulio Douhet', p. 32; no influence: R. Higham, *The Military Intellectuals in Britain, 1918-1939* (New Brunswick, N.J., 1966), p. 258.

<sup>44</sup> B. Greenhous, quoted in Meilinger, 'Giulio Douhet', p. 40n.

<sup>45</sup> Meilinger, 'Giulio Douhet', p. 33.

In Germany, Luftwaffe doctrine ultimately rejected Douhetism in spite of efforts by indigenous enthusiasts, such as Dr Robert Knauss, to advance it. Knauss, a First World War pilot, director of Luft Hansa, and a future commandant of the Luftwaffe General Staff College, published pseudonymously a novel, *Air War 1936: The Destruction of Paris*, that echoed many of Douhet's themes.<sup>46</sup> In Knauss's fictional war, the Royal Air Force played the part of Douhet's German Air Force, and France reprised its role as France, surrendering after two weeks of RAF bombardment. As with *The War of 19\_\_*, MKSz published a serialised Szentnémedy translation of the book. Knauss's polemic had little effect on the Luftwaffe, whose 1935 Regulation 16, *The Conduct of Aerial War*, after acknowledging its mission to 'break down the will of the enemy', defined that will as 'finding its greatest embodiment in its armed forces. Thus, [destruction of] the enemy armed forces is therefore the primary goal in war.'<sup>47</sup> After dealing at some length with campaigns against 'sources of power' that included military, transportation and industrial targets, Regulation 16 declared 'attacks against cities made for the purpose of inducing terror in the civilian population are to be avoided on principle.' Such attacks should occur only in retaliation following enemy bombardment of 'defenceless and open cities', and even then must be planned precisely because 'selection of the wrong time, combined with a poor estimate of the desired effect upon the enemy, can in some circumstances result in an increase in the enemy's will to resist, rather than a reduction of the will.' Finally, in stating 'whether gas bombs can be used will be determined by international agreement and enemy behaviour if he initiates a terror

---

<sup>46</sup> F. Szentnémedy, *Légiháború 1938-ban: Páris szétrombolása* (Budapest, 1935). The title in the text is a translation of original German title: *Luftkrieg 1936: Die Zertrümmerung von Paris*. Szentnémedy pushed the date of Knauss's war back two years, presumably to account for the lag in translation. The first English translation was published in 1932 under the title *War in the Air* (see note 68).

<sup>47</sup> Quoted in J.S. Corum and R.R. Muller, *The Luftwaffe's Way of War: German Air Force Doctrine, 1911-1945* (Baltimore, Maryland, 1998), pp. 118-120.

attack', the Luftwaffe contradicted Douhet's conviction that the employment of poison gas was inevitable.<sup>48</sup>

Douhet's doctrine was introduced to France in a 1927 issue of *Revue Maritime*, and it was well received by French airmen who 'had begun to chafe in their subordinate role' to the army.<sup>49</sup> At the end of the First World War, the French air service had led the world, but a decade later the once formidable force had lost its position of pre-eminence. In addition to ageing aeroplanes and an outdated concept of employment, there were deep institutional problems. Although the Armée de l'air comprised 260 squadrons of over 3,000 aircraft, there was no air ministry or air staff, and every officer and aeroplane was under the control of a French army unit.<sup>50</sup> By 1931, an air ministry had been established and the air force had gained some measure of autonomy, but the difficulties persisted. Szentnémedy, a keen and professional but distant observer, was able to point to 'a succession of accidents, cancellation of aircraft types, repetitive financial crises in the aircraft industry and continuous reorganisation manifested in the highest levels of the aviation ministry' as evidence that France's qualitative advantage was fading quickly.<sup>51</sup> Also recognising this, and feeling constrained by 'liberal disarmament ideals that characterised much of the Socialist agenda', French air power advocates were attracted to Douhet's prophetic vision both as a national strategy and a way to maintain the Armée de l'air's independence.<sup>52</sup> And although the doctrine of strategic bombing was never adopted in Paris, the French aeroplane industry came the closest in the inter-war years to making Douhet's 'battle-plane' a reality.

---

<sup>48</sup> Ibid. pp. 133-42.

<sup>49</sup> Corum, 'Airpower Thought in Continental Europe', p. 153.

<sup>50</sup> R.J. Young, 'The Strategic Dream: French Air Doctrine in the Inter-War Period, 1919-39', *Journal of Contemporary History*, Vol. 9, No. 4 (Oct., 1974), p. 59. <<http://www.jstor.org/stable/260291>> accessed 3 Sep. 2013.

<sup>51</sup> Szentnémedy, 'Vélemények és eszmék', p. 103.

<sup>52</sup> Cain, *Forgotten Air Force*, p. 35.

Beginning in 1933, the air force took possession of a new class of multi-role machines called Battle-Combat-Reconnaissance aircraft. The BCR, endorsed if not inspired by Douhet's work, was a compromise between the requirements of the three services, and was meant to fulfil all of them. In fact, it failed to fulfil any: as a bomber it was too slow and carried too few bombs, as a fighter it was too heavy, and as a reconnaissance craft it was too vulnerable.<sup>53</sup> These shortcomings were readily apparent to some French military analysts, who disparaged the BCR concept as well as the doctrine of unrestricted aerial bombardment.

In his article that concluded the series, Szentnémedy quoted extensively two of those critics who had reviewed *The War of 19\_\_* in French aviation journals. In the August and September 1930 editions of *Les Ailes*, Jean Herbillon praised Douhet for his success in gaining recognition for the ascendancy of air forces, but doubted whether his work was revolutionary, pointing to the writings of three senior French officers whose work contained similar elements. Herbillon wrote with an acid pen, directing sarcasm not just at Douhet, whom he considered insufficiently imaginative for a futurist ('This wonderful writer shows us with clarity those probabilities which today are already afoot'), but also at the French services' cynicism (funds intended for a joint aerial effort would instead 'go with these aims: to enrich the infantry, to increase security for the cavalry, and to build cruisers.')<sup>54</sup> Herbillon also questioned Douhet's reliance on daylight bombing, postulating that future technological developments would 'free fliers from the disadvantages of night aviation and give them back their eyes.' In response, Szentnémedy recapitulated the challenges of night operations: the difficulties in navigating to and identifying the target, the danger of night landings, the near-certainty of aircraft damage in forced landings at night in unfamiliar

---

<sup>53</sup> Ibid.

<sup>54</sup> Szentnémedy, 'Vélemények és eszmék', p. 105.

terrain, and the risk of disorientation when flying into the enemy's searchlights.

Szentnémedy also cited a French colonel's research that showed by month the paucity of suitable weather for night flying. Although he conceded that small countries might be forced to conduct night bombing operations in spite of the risks, and that night attacks could be important in maintaining 'continuous effect' on the enemy, Szentnémedy reached a clear Douhetian conclusion: 'There is no doubt that daylight bombing is the most effective.'<sup>55</sup>

The more narrow and practical criticisms of another Frenchman, Camille Rougeron, received a fair airing, but no effective rebuttal. Rougeron, a naval engineer, presented objections based less on Douhet's theories and more on existing aeronautical technology and immutable geography. Implementation of the Italian's recommended single-aircraft fleet would require that the battle-plane be equal to the demands of territorial defence as well as offensive action. Rougeron examined the two giant aircraft that best embodied the battle-plane ideal, Caproni's PB 90 and Dornier's Do X, and found their performance in two critical areas inadequate. Neither of these aeroplanes could climb high enough and fast enough to intercept conventionally sized bombers; a problem in any case, Rougeron explained, but one exacerbated for countries whose critical centres of power were located near their frontiers, such as Britain and Italy.<sup>56</sup> Although Szentnémedy did not address this concern specifically, *MKSz*'s readers might well have added Hungary to that category.

In his closing paragraphs Szentnémedy added a pair of concerns of his own, of which the first was access to oil. 'One of the largest problems, and one that cannot be undervalued, in the maintenance of a large combat air force, is the question of petroleum products, which would be a serious crisis for small landlocked and surrounded countries. This problem

---

<sup>55</sup> Ibid. pp. 106-116.

<sup>56</sup> Ibid. p. 109.

deserves a special study on its own.’ Then, in a phrasing that would have set on edge the teeth of his land-forces readers, Szentnémedy characterised Douhet’s fictional German air force as pursuing ‘the most extreme execution of the idea of the centre of gravity (*súlypont*)’, while the Franco-Belgian alliance ‘had a tendency toward frittering away, where the air forces are lost as the land forces’ auxiliary service’.<sup>57</sup> The passing reference to Clausewitz failed to mollify the critics, one of whom, Mihály Ibrányi, like Szentnémedy a captain of the general staff, argued in the August 1931 issue of *MKSz* that the most decisive use of the air force would be achieved in support of ground combat. Szentnémedy’s answer revealed his devotion to the idea of air power as the ultimate arbiter in warfare: ‘The centre of gravity is in the air, and to prevail in this regard will be to the detriment of all other equipment expenditures—everything must be devoted to the development of the air force. This will create an air force that if employed correctly in a future war, could surely, and above all quickly, bring the war to a decision.’<sup>58</sup>

There was no European war to bring to a decision in 1931, and no Hungarian air fleet in being that could have taken part in such a war. But the *MKSz* articles provide clear evidence that Hungarian officers were aware of the currents of contemporary continental air power thought, and also debated their relevance and wrestled with their implications. Without regard to the ultimate outcome of Szentnémedy’s enthusiasm for strategic bombing, this discourse reflects well on the officer corps’ intellectual curiosity and *MKSz*’s academic rigour. In penning these pieces, Captain Szentnémedy demonstrated broad knowledge and interest in European aviation developments: in a Magyar publication he promoted the ideas of an Italian general, about which he read in a German journal, and included trenchant

---

<sup>57</sup> Ibid. p. 116.

<sup>58</sup> Quoted in Holló, *A Galambtól a Griffmadárig*, p. 56.

criticism of leading French airmen. More than just a feat of linguistics and research, Szentnémedy's articles meant that in 1931 the Hungarian officers were better acquainted with Douhet (and his detractors) than were their counterparts in America or Britain, whose countries did not suffer from treaty provisions and diplomatic isolation.

By 1933 Szentnémedy had published *Aviation*, a 78-page monograph that included history, theory and law, as well as an appreciation of Hungary's post-Trianon aeronautical situation. The fervency evidenced in Szentnémedy's *MKSz* articles was somewhat diminished, due perhaps to opposition from his colleagues (including then-Captain Géza Vörös, who in 1941 became Chief of the Air Staff), a lack of fresh Douhet writings, or simply his taking a more philosophical approach in this longer and broader work. In *Aviation*, Szentnémedy acknowledged that the theory of independent air warfare remained untested, that its 'finished or final form had not yet been shown', and 'many questions remain unclear.'<sup>59</sup> Despite the less dogmatic trappings, Szentnémedy was in 1933 still a committed disciple of Douhet. The fifth chapter of *Aviation* contained a case for strategic bombing that began with a discussion of the nature of war. In this section Szentnémedy explicitly tied Clausewitz to Douhet.

According to Clausewitz, the great German soldier-philosopher, war, as policy's most energetic instrument, has as its final objective that the enemy be forced to our own will, with the use of every tool to overcome him. That would require the creation of such conditions that the enemy population would find unbearable, and which would force them to sue for peace.<sup>60</sup>

Until the advent of the aircraft, Szentnémedy contended, land forces had to defeat directly the opposing army, or naval forces had to attack the enemy indirectly by blockade. In either case, the enemy populace, largely distant from the front lines, would not feel the full effects

---

<sup>59</sup> Szentnémedy, *A repülés*, (Budapest, 1933), p. 27.

<sup>60</sup> *Ibid.* p. 28.

of war. The aeroplane ‘brought war of this nature to an end, because it allowed man to free himself from the earth.’ Thus freed, man could employ the aircraft as an instrument of war and attack the enemy at any place along his front, the effective range of this new weapon having ‘no practical limits’.

It can hold at risk of death every citizen, without regard to sex, age, social position; the palaces, factories, industries, railways can be objects for attack just as well as military lines—perhaps even better. In short, air forces change completely the nature of war as it has been known and strengthen the notion that war will be a battle of peoples and not just a battle of armed forces.<sup>61</sup>

Szentnémedy also repeated Douhet’s counterintuitive idea that unrestricted air warfare (*korlátlan légi háború*) would in the end be more humane than previous wars.<sup>62</sup> Douhet considered it ‘the quickest and most economical way of ending the war, entailing the minimum loss of blood and wealth on both sides.’<sup>63</sup> In his *MKSz* abridgement, Szentnémedy described General Reuss’s plan as ‘the most simple, cheapest and quickest solution’, and in the 1933 work he emphasised the importance of terror in undermining the enemy’s will to resist. ‘Panics, which in dense populations can develop into mass hysteria and revolution, can bring about an end to the enemy nation’s resistance, and quickly end the war. Therefore there will be fewer victims. The more terrible the air war, the more humane it will be.’<sup>64</sup>

From the possible reactions of foreign peoples, Szentnémedy moved to consideration of the particular vulnerabilities of his own country. Following Camille Rougeron’s example, he

---

<sup>61</sup> Ibid.

<sup>62</sup> Douhet was not alone in this view. B. H. Liddell Hart advanced it in *Paris: or, The Future of War* (London, 1925), and the Russian-American aircraft designer and theorist Alexander de Seversky held it well into World War II. See his ‘Strategy of Air Power More Humane than Blood-bath of Surface Warfare’ in *The Pittsburgh Press*, 13 Nov 1943, p. 1. See also P.S. Meilinger, ‘Alexander P. de Seversky and American Airpower’ in Meilinger, (ed.), *The Paths of Heaven*. The geneticist J.B.S. Haldane promoted gas (without regard to its delivery system) as the most humane weapon in *Callinicus: A Defence of Chemical Weapons* (London, 1925).

<sup>63</sup> Douhet, *Command of the Air*, p. 362.

<sup>64</sup> Szentnémedy, *A repülés*, p. 29.

examined the potential effects of aerial attack from geographic and economic points of view, and concluded that increased urbanisation magnified a nation's vulnerability.

Naturally this sensitivity [to attack by air] is greater for cities, and increases with their number. Therefore the number and size of its cities can indicate a country's aerial vulnerability. The degree that a country is endangered depends on the economic significance of the targeted area and its relationship to the entire state. If the country is chiefly agricultural with widely scattered settlements, then the attacks will have very little success and the attackers will fritter away their assets without considerable effect. It is a different situation, however, if a small agricultural country has its entire industrial organisation consolidated in a single city (e.g., Budapest). In this case a resounding effect is probable, because the state's entire industrial production could become paralysed at practically the same time.<sup>65</sup>

After a comparison of the population density of ten European countries (Hungary was the fifth most densely populated, at ninety-two people per square kilometre), Szentnémedy warned that Germany and Hungary risked 'suicide' if they failed to take seriously their need for comprehensive air defence. Breaking with the Douhetian ideal of the sufficiency of the battle-plane, Szentnémedy included fighter aircraft as part of the required tools of air defence. Those fighters would be especially critical to a Hungary deprived of its traditional borders, Szentnémedy argued in his conclusion: 'In the end, it can be settled that our rump country has no such point that our neighbours' bombers could not easily reach.' This had come about because Hungary, which 'lives in a hostile atmosphere', was 'disarmed and completely defenceless in the air.' Such a condition could not long be maintained, but 'fortunately the hearts, thoughts and intellectual energies cannot be tied down.' *Aviation* ended with a strong assertion of its primacy: 'We must not forget the basis for the entire world's aerial armament and organisation: aviation is the guardian of a modern state's

---

<sup>65</sup> Ibid. p. 37.

power, the strong pillar of its economy, and is essential to its cultural and commercial needs.<sup>66</sup>

With the exception of a slightly tempered tone in some sections and an implicit rejection of Douhet's conception of the battle-plane as a viable craft for air defence, *Aviation* deviated little from the views Szentnémedy expressed two years earlier in the *MKSz* version of *The War of 19\_\_*. Certainly there was no softening of the core Douhetian belief that air power was a war-winning—not just a war-fighting—instrument. After calling air forces fundamentally offensive and ground forces essentially defensive, Szentnémedy went on to describe victory as an offensive activity and to suggest 'the ground forces' role should be restricted to defence of the home territory, while the war is decided in the air.'<sup>67</sup>

That same conviction was apparent in Szentnémedy's decision to translate Knauss's work *Air War 1936* for publication in Hungary, first as an abridged serial in the September - November 1934 issues of *MKSz*, and then in a 1935 monograph brought out by the Hadiakadémia press. Elements of Knauss's book read like extracts from Douhet, with Knauss's Air Commodore Brackley standing in for Douhet's General Reuss. Brackley was an air power prophet who realised that the days of chivalrous fighter combat were over, and that a new form of warfare had been born. He formulated its tenets:

1. The main purpose of the air arm is to break the enemy's will to war by bombing raids on his country and population.
2. If large quantities of bombs are to be dropped accurately on targets far from the home aerodrome, very big airplanes will be needed to carry heavy loads over a wide action radius...
3. Such bombing machines can and must defend themselves against attacks by enemy aircraft...
4. Maximum technological achievement can only be attained by apportioning all duties to highly qualified specialists. But such division of labour and specialisation is only possible in a large machine carrying numerous crew.

---

<sup>66</sup> Ibid. pp. 37-40.

<sup>67</sup> Ibid. p. 29.

5. Only large machines of this type, proceeding in close groups are capable of carrying out aerial tactics which are impossible in a single-seater scouting machine where one man has to do everything simultaneously...

6. Bombing raids must take place in daylight when accurate aim is possible. Only by day, moreover, are squadron flights in close order possible.<sup>68</sup>

Not only were the assumptions of Douhet and Knauss about air warfare strikingly similar, so were their conclusions about how such unrestricted air war would play out. Both believed in the fundamental fragility of a society under attack. In each account the panicked inhabitants of Paris pressed their leaders for peace, although Knauss cast a more jaundiced eye on the French than did Douhet: his Parisians, enraged at the failure of the French air force to stop the British raiders, even pulled innocent French aviators from taxis and bludgeoned them to death. ‘In this night the last vestiges of law and order vanished,’ Knauss wrote. ‘Man fought against man, driven by the sheer urge of self-preservation.’<sup>69</sup> Knauss also showed a greater appreciation of air power’s effectiveness against fielded forces, as he described the complete destruction of the French landing party after a devastating low-altitude attack that cost Brackley his life.<sup>70</sup>

The 1935 publication of *Légiháború 1938-ban: Páris szétrombolása* represented the high-water mark of Szentnémedy’s promotion of Douhetism. Through his three major works on the topic he had presented a remarkably consistent view of the role and utility of air power in warfare. That view was fundamentally the one espoused by Giulio Douhet himself, and represented in the United States by Billy Mitchell and in Great Britain by Hugh Trenchard. At its heart was the belief that a large and independent air force equipped with heavy long-range bombers could, with an unrestricted aerial campaign directed at the enemy’s centre of gravity, bring a war to a quick and decisive end. Szentnémedy had

---

<sup>68</sup> R. Knauss, *War in the Air*, trans C. Sykes (London, 1932), p. 67.

<sup>69</sup> *Ibid.* pp. 85, 171.

<sup>70</sup> *Ibid.* p. 248.

absorbed and incorporated some of the criticism of Douhet, with the result that his own version of strategic bombing theory was less deterministic and his vision of air power more expansive. Without casting off his trust in the ultimate decisiveness of the unrestricted aerial offensive, he broadened his understanding of the offensive to include some of the tactical operations he had previously characterised as ‘frittering away’.

One of these was the idea of ‘assault aviation’ advanced by Amadeo Mecozzi, Douhet’s countryman and critic.<sup>71</sup> Szentnémedy considered Mecozzi’s concept, which was a refinement of his earlier *guerra aerea concomitante*, to be one of the three primary strains of air power theory, along with strategic bombing and the French tactic of ‘halting aviation’ (*l’aviation d’arrêt*).<sup>72</sup> Mecozzi’s vision of air force employment was in direct opposition to Douhet’s: instead of masses of bombers attacking population centres from high altitude, he advocated multiple formations of fighter-sized aeroplanes, capable of striking small targets at low altitude in cooperation with ground forces. Szentnémedy first pointed out what he saw as the technological contradictions inherent in assault aviation. Aeroplanes intended to conduct low-altitude attacks in small formations must be fast, manoeuvrable, and hardy in order to withstand ground fire, and those characteristics greatly reduced bomb capacity. Overall, Szentnémedy thought its success unlikely. ‘It is madness to deploy fast machines at low altitudes, where the infantry and artillery fire is concentrated.’ His second objection was organisational. However much Mecozzi might argue for bureaucratic autonomy, an air force that conducted chiefly tactical missions was at risk of being subsumed by the army.

‘Although Colonel Mecozzi claims that the attack aviation is not a cooperative arm with other branches, it is to be feared that his idea will lead to the independent air force in large

---

<sup>71</sup> Mecozzi popularised the term in his 1933 book, *L’Aviazione d’Assalto*.

<sup>72</sup> F. Szentnémedy, ‘Új hadműveleti irányelvek a légiháborúra’, *Magyar Katonai Szemle*, 10/1935, p. 121.

part falling under the ground force command.’ Some French commentators shared this fear, claiming that *l’aviazone d’assalto* really represented a return to First World War employment concepts and would make the air service again an auxiliary arm. Unless Mecozzi could prove otherwise, ‘the entire assault aviation theory can be considered just an extremist idea (*tulzott gondolatnak*)’.<sup>73</sup> Szentnémedy was more receptive to Mecozzi’s insistence on a fleet composed of a single aircraft type. Douhet had also agitated for a single-type fleet, but his multi-place, multi-engine long-range battle-planes would have had little in common with the single-seat, single-engine low-level attackers Mecozzi had in mind.

*L’aviazone d’assalto* was grounded in Mecozzi’s extensive flying experience. Originally enlisted in the engineer corps, he earned his wings in 1915, a battlefield commission in 1917, and ended the war with six air-to-air victories. After the war he served in the Italian aviation mission in Paris, and in 1929 took command of the 7th Land Fighter Group.<sup>74</sup> His first-hand knowledge of flight contrasted with Douhet’s limited practical exposure, and it was this, in the words of Regia Aeronautica historians, that ‘set the fighter pilot against the Regio Esercito General Staff Colonel.’<sup>75</sup> Mecozzi slowly gained support within the RA, which accelerated the organising and training of assault units and the development of the Breda 65, a heavy attack aircraft conceived along Mecozzian lines. Szentnémedy sensed the shift in the Regia Aeronautica’s orientation: ‘It looks like the Italians have converted to ‘assault aviation’ and the new way of employment.’<sup>76</sup>

---

<sup>73</sup> Ibid. p. 122.

<sup>74</sup> R. Sganga et al., ‘Douhet’s Antagonist: Amadeo Mecozzi’s Alternative View of Air Power’, *Air Power History* 58/2 (Summer 2011), p. 6.

<sup>75</sup> F. Botti and M. Cervelli, quoted in *ibid.* p. 7.

<sup>76</sup> Szentnémedy, ‘Új hadműveleti irányelvek’, p. 135.

Szentnémedy had not converted, but he had begun to think more seriously about strategic bombing from the point of view of the country under attack. When he first considered the topic in May 1932, Szentnémedy denied the importance of air defence. He took a Douhetian line in favour of the attack, contradicting Clausewitz's claim that defence was the stronger form of war.<sup>77</sup> Szentnémedy allowed that an 'everlasting natural law' provided for countermeasures to all innovations in the conduct of war, but observed that air defence capability 'limped along' behind aircraft development. 'This therefore demonstrates its greatest weakness, without regard to the fact that air defence naturally, like all defence, stands from the first at a certain disadvantage against the attack.'<sup>78</sup> Recent air defence exercises in France, Germany and Czechoslovakia showed some success in areas such as blackout procedures and military-civilian cooperation, but highlighted shortcomings in air raid alarm effectiveness. Szentnémedy noted a general lack of enthusiasm on the part of the cities' inhabitants, a particular problem in Königsberg. While he dutifully reported the lessons derived by the various exercise directors, Szentnémedy rendered a larger judgement of his own:

We can establish as a final conclusion that defence in air warfare is an extremely expensive proposition, and is such a thankless job for the responsible leaders, that only negative outcomes can be reached. Air defence is pure defence in a real sense. Either it does not attack the opponent, a lucky outcome for them, or it just moves the war and its victims somewhere else; or in the case that the attack is successful, the fight continues above our heads and stirs anger in the people, because the air defence proved a fiasco. While still in peacetime we have to use all methods (print, radio, film) to quash the formation of mass panic, which, according to experience, can breed revolutionary movements in the cities affected by war, which also must be thwarted.<sup>79</sup>

---

<sup>77</sup> C. von Clausewitz, *On War*, trans. M. Howard and P. Paret (Princeton, 1976), pp. 84, 358.

<sup>78</sup> F. Szentnémedy, 'A honi légvédelem problémái és korszerű légvédelmi gyakorlatok', *MKSz*, 5/1932, p. 108.

<sup>79</sup> *Ibid.* pp. 122-23.

Szentnémedy here anticipated civilian rage directed at ineffectual air defenders, a fear which later was manifested in its most murderous form in Knauss's *Air War 1936*.

He presented a new perspective in 'Is defence against unrestricted air war possible?', published in two parts in the summer 1935 issues of *MKSz*. While Szentnémedy still held 'active' air defence (e.g. the attempt to defeat an attacking force with fighters and anti-aircraft artillery) was doomed to failure, he had come to believe a programme of 'passive' air defence could mitigate the worst effects of bombing. The first passive measure was dispersal: 'Extensive large cities with their solid mass will always represent favourable and attractive targets. If, however, these targets are divided and dispersed in suitable measures, this immediately offers certain protection.'<sup>80</sup> This protection was especially important for rump Hungary, Szentnémedy reasoned, because of the country's vulnerability to the air forces of the Little Entente. A map titled 'Hungary's indefensibility from the air' tied that vulnerability to Trianon, showing that the entire country lay within range of Czechoslovak, Romanian and Yugoslav bombers launched from airfields in territory lost under the treaty.<sup>81</sup>

The second passive measure was civil defence. Szentnémedy surveyed civil defence initiatives in other European countries and urged Hungary to emulate them. He judged the Soviet Union to be the most advanced in its preparations, having constructed in Moscow, Leningrad and Kharkov underground cinemas capable of sheltering masses during an aerial bombardment. In London and Paris the underground railways could perform the same function. The caverns in Kent received particular attention, since the British press had reported a plan to shield up to a hundred thousand people there in the event of sustained attack. Szentnémedy suggested that the cave system under the Buda castle, which had

---

<sup>80</sup> F. Szentnémedy, 'Van-e védelem a korlátlan légiháború ellen?', *MKSz*, 6/1935, p. 96; passive and active defence: p. 106.

<sup>81</sup> *Ibid.* p. 100.

protected the populace during the Ottoman siege in the seventeenth century, could be used in the same way.<sup>82</sup> Subterranean shelter would provide the most protection against the effects of blast and fire, but it should be avoided in the case of chemical attacks, because the heavier-than-air poison would settle in the tunnels. The best plan in a gas attack, then, would be ‘to reach the rooftop or highest floor, where the air is clear.’ This last bit of advice came from a series of drawings in the article’s second half, which depicts sixteen ‘wrong and right’ responses to air raids reprinted from the German magazine *Kriegskunst in Wort und Bild*. The pictures reinforce Szentnémedy’s earlier point about dispersal, albeit on a human rather than industrial scale. In them, people are instructed to clear the streets, go to cellars, avoid congregating, shelter their horses, seek cover in agricultural ditches and train tunnels, stay away from windows, remain calm, black out lights, move upwind, and wipe chemicals from their clothes with a handkerchief.<sup>83</sup> The specificity of the instructions and the cartoon-like illustrations were unusual for *MKSz*, but presaged the style later adopted by *Riadó!*, the magazine of the Hungarian Air Defence League intended to appeal to the broadest possible audience.

This article elicited a sharp response from vitéz Gustáv Hellebronth, a retired Honvéd lieutenant general, who in the August 1935 issue of *MKSz* disputed Szentnémedy’s basic premises. Whether from courtesy or contempt, Hellebronth managed to condemn Szentnémedy without ever mentioning his name or even the title of his offending article. Picking up on the editor’s penchant for arguing from the authority of international experts, Hellebronth aimed his broadside at ‘alien ideas’.

---

<sup>82</sup> Ibid. pp. 102-3.

<sup>83</sup> Ibid. pp. 95-100.

There are those who fear that the ‘unrestricted air war’ propagated by foreigners will lead irretrievably to the destruction of civilisation. Others, however, trust that the worst danger can be avoided through ‘civil defence’.

Those who believe in ‘unrestricted air war’, on foreign authority, refer in the first place to Marshal Foch, who said, ‘The civilian population has to be attacked so that the opposing people can be crushed at their root.’<sup>84</sup>

But, Hellebronth continued, the First World War had demonstrated just how difficult it was to break down a nation’s resistance. It could possibly be done after ‘years of grinding work,’ but it is unlikely to occur as the result of a transitory aerial bombardment. ‘Countless examples show that fleeting destruction, whether caused by nature or enemy forces, can be repaired swiftly.’ Hellebronth was convinced that ‘quickly played out air operations’ would not have a lasting or decisive effect on civilian populations, and at the same time he felt sure that emergency programmes would make little difference in the event. ‘Civil air defence is certainly a beautiful and humane thought, but in reality, unfortunately, impractical.’<sup>85</sup> Just as no law or measure could prevent mass terror during a terrible natural catastrophe, no preparation could ensure discipline during a surprise air attack. Hellebronth also opposed civil defence on economic grounds, noting Hungary’s mounting deficit, and he insisted that the limited military budget be spent on weapons rather than gas masks. He even doubted that many people would mind, suggesting that over-taxed citizens ‘already bled dry would rather die than pay (especially if death is not too near and not too certain)’. Having rejected a key component of Douhetian theory—the essential fragility of modern society—Hellebronth contended that the opposing army was the proper target for aerial bombardment. He wrote, in a passage that echoed Luftwaffe doctrine, ‘The air force’s main mission and concern are

---

<sup>84</sup> G. Hellebronth, ‘A légiháború és a védekezés módjai’, *MKSz*, 8/1935, p. 100.

<sup>85</sup> *Ibid.* p. 101.

not the peaceful citizens, but rather the quick destruction of the opposing air and ground forces and resources. This is the only road leading to victory'.<sup>86</sup>

The answer to Hellebronth came in December 1935, but not from Szentnémedy. It was instead a passionate denunciation penned by vitéz Lajos Németh, whose use of the first-person plural suggests that he represented corporate convictions. Németh referred to Hellebronth as the 'illustrious author' whose article dismissed the efficacy of strategic bombing. 'It is possible,' Németh conceded, 'to have differing opinions about unrestricted air warfare, but it is beyond doubt that the air arm will have a decisive role in a future war.'<sup>87</sup> It was less reasonable to question the wisdom of civil air defence, the implementation of which was nearly universal, especially in light of the recent Italian bombing in Abyssinia. Németh countered Hellebronth's assertion that defence against a surprise attack was impossible: 'It is indeed possible! We are not defenceless if we prepare conscientiously and thoroughly.' He also pointed to a generation gap as a reason for the wide variance in their thinking on the matter.

As old a soldier as he is, he forgets that our military discipline does not in the last instance rest on the results of education and breeding. Laws, propaganda, courses of study, leagues, additional air defence blackouts and exercises (which unfortunately we still have not held in Hungary) all are necessary so that a broad cross-section of the population can recognise the dangers of aerial attack as well as the possibilities for defence, and at the same time we can train them for air defence discipline!<sup>88</sup>

Although Hellebronth was in fact old—he was three years old when the Dual Monarchy emerged from the Compromise of 1867—ideological orientation may be a better explanation. Németh's confidence in the power of collective action to overcome difficulties was characteristic of a progressive statism that infused political movements on both the right

---

<sup>86</sup> Ibid.

<sup>87</sup> L. Németh, 'Polgári légvédelem', *MKSz*, 12/1935, p. 97.

<sup>88</sup> Ibid. p. 98.

and left at the time, whereas Hellebronth's pessimism in the same matter suggests a conservative turn of mind. Certainly Németh and later Szentnémedy thought him a hidebound reactionary.

Hellebronth considered himself an objective observer who in his earlier article simply endeavoured to look at the 'boiling-over questions' from a 'higher viewpoint and broader scope'.<sup>89</sup> He sought a useful general theory of aviation, unlike the 'followers of foreign fantasies' who advocated independent air operations. As part of that theory, Hellebronth outlined three areas in which military aeroplanes had 'outstanding advantages' over the traditional branches of the army. Aircraft were much faster than cavalry, which meant they could range farther in reconnaissance, take the place of cavalry in the attack, and better pursue the fleeing enemy after the battle. Bombers rivalled artillery for effect and had a longer reach, and aircraft machine guns could be devastating to opposing infantry. He also acknowledged the growing capability of airborne transport. Against this stood aviation's fatal disadvantage: the utter inability of aeroplanes to secure and occupy terrain. This deficiency 'predestined air forces to the surprise initiation of war', after which they would assist the slower-mobilising land forces. 'Air forces therefore have two roles to fulfil: as an independent force at the opening of the war to conduct raids, and then to fight alongside the army as a separate branch.'<sup>90</sup> In tying the air force to the land war, Hellebronth repudiated the basis for strategic bombing. He did so, he claimed, on solid historical grounds. It was well established that in the world war civilian collapse preceded military defeat. Indeed, the idea of society's breakdown was at the heart of strategic bombing theory. Why then, Hellebronth asked, wasn't bombing the cause of that civilian collapse? In order for

---

<sup>89</sup> G. Hellebronth, 'A légiháború és a védekezés módjai', *MKSz*, 6/1936, p. 117.

<sup>90</sup> *Ibid.* p. 118.

unrestricted air war to be a serious strategic theory, its proponents must show that air power is capable of crippling the people's will to resist. In spite of the experience of the First World War, the Japanese bombing of Shanghai, and Italian operations in Abyssinia, there was no proof that aerial attacks could in fact achieve that effect. Hellebronth again compared bombardment to a natural disaster (a theme he would return to in the third instalment). 'From every example...it seems that the passing effects of the danger and destruction—caused by nature or opposing forces—immediately blow over'.<sup>91</sup> Some of Hellebronth's blows must have begun to land, because Szentnémedy took the extraordinary step of appending an editorial disclaimer to the end of this article. It was, according to Szentnémedy, 'an original thought' and 'skilfully presented', but the theory of 'restricted air warfare' was not supported by experience, and this should therefore be 'the end of the argument'.<sup>92</sup>

The argument would go two more rounds, however. Szentnémedy published his own lengthy riposte five months later; not, he claimed, in order to answer directly the previous article or to sustain the dispute, but rather 'to show to laymen, on the basis of the extraordinarily rich foreign literature, the current concepts, conditions, possibilities and functions' of air warfare.<sup>93</sup> These ideas were 'crystal clear' to the experts, and showed the 'indisputable influence of air war's possibilities'. Predictably, the first expert consulted was Douhet, whose concept Szentnémedy presented in a five-hundred-word précis. It was important to begin with Douhet, he wrote, because the late Italian general's concept of unrestricted air warfare was evident in the organisation, training, and equipping of the great powers' air forces. He later offered as concrete evidence the ratio of 'offensive versus

---

<sup>91</sup> Ibid. p. 119.

<sup>92</sup> Ibid. p. 122.

<sup>93</sup> F. Szentnémedy, 'A légiháború és a védekezés módjai', *Magyar Katonai Szemle*, 11/1936, p. 105.

defensive' aeroplanes in a selection of European countries. In the First World War, according to Szentnémedy, the proportion of bombers to fighters was roughly 1:9, whereas the current ratio in Britain was 2:1, in France 1:1.5, in Italy 1:2, in Czechoslovakia 1:3.5, and in the Soviet Union 1:4. 'These numbers show, however much it is denied and concealed, that today everywhere Douhet's ideas are followed'.<sup>94</sup> This passage gives further weight to Szentnémedy's revealing comment earlier in the article concerning the far-reaching influence of Douhet: 'It is no use, however, to preach "unrestricted air warfare" everywhere and at all costs, because it is the fundamental assumption. We now want to examine the current conditions.'<sup>95</sup> These statements show that Szentnémedy held to the central precepts of Douhetism as late as 1937. He had enlarged his conception of air power beyond the limits set down by Douhet, but he had not abandoned the Italian's core concepts.

This expansive view of air power was displayed when Szentnémedy addressed Hellebronth's objection regarding the inability of air forces to take and hold territory. Szentnémedy admitted that it was not possible at the moment, but he then mentioned the promising developments in airborne infantry, a topic that had been raised in the pages of *MKSz* in March, May and July 1936, and one that Szentnémedy himself would take up the following year.<sup>96</sup> He pointed to recent manoeuvres in which the Soviets delivered by air three infantry battalions behind the opponent's lines, demonstrating the potential of 'vertical envelopment'. Szentnémedy found the roots for this innovative use of aeroplanes in Douhet and Clausewitz. 'Attaining tactical air superiority, which in time will lead to command of

---

<sup>94</sup> Ibid. p. 115.

<sup>95</sup> Ibid. p. 109.

<sup>96</sup> M. Bobok, 'Vállalkozás ejtőernyőkkel az ellenség hátában', *Magyar Katonai Szemle*, 3/1936; E. Tóth, 'Szállító repülés', *MKSz*, 5/1936; Tóth, 'Csapaszállítások repülőgéppel és ejtőernyős kirakások', *MKSz*, 7/1936; F. Szentnémedy, 'A függőleges átkarolás kérdéséhez', *MKSz*, 2/1937, and Szentnémedy, 'Az ejtőernyő újabb katonai jelentősége', *MKSz*, 4/1937.

the air, makes the strategic effect felt in the vast majority of cases; and it is possible that with the range, extraordinary speed, and ability to reach quickly the centre of gravity, the air force has fashioned such an instrument for the supreme leadership that is worth every other force or enterprise.<sup>97</sup>

Regarding the use of air forces on the battlefield, Szentnémedy offered a partial concession. It was possible, of course, to intervene temporarily in the army's battle, but there would be few targets of value for airmen, and such operations generally meant 'foolish sacrifice'.<sup>98</sup> He conceded nothing on the bombing of civilians. 'If we seek the fastest decision,' he wrote, 'we have to attack the weakest point.' The historical record was clear: 'By shattering the people's morale it is indeed possible to reach a decision in war.' Abyssinia could not represent a defeat of the Douhetian idea of unrestricted air warfare, because the Regia Aeronautica was not tasked with conducting such an operation there. The bulk of Italian aeroplanes remained in the Mediterranean in case of a European conflict, but air power nonetheless contributed mightily to the Abyssinian campaign. Szentnémedy quoted Italian experts who estimated that the victory achieved there in seven months would have taken two to three years without the Regia Aeronautica's contribution.<sup>99</sup>

Hellebronth's reply, the last piece in this long-running exchange, appeared in November 1937. This time the editorial disclaimer, Szentnémedy's final word on the matter, appeared at the beginning: 'The editor does not fully agree with this article and publishes it as point of interest, because in contrast to this article, the editor considers the moral and material effects of aerial attacks important'.<sup>100</sup> After taking Szentnémedy to task for the condescending tone

---

<sup>97</sup> F. Szentnémedy, 'A légiháború és a védekezés módjai', *MKSz*, 11/1936, p. 116.

<sup>98</sup> *Ibid.* p. 117.

<sup>99</sup> *Ibid.* p. 118.

<sup>100</sup> G. Hellebronth, 'A légiháború és a védekezés módjai', *MKSz*, 11/1937, p. 96.

of his November 1936 item, Hellebronth took up again his earlier comparison of air attacks to natural disasters. He demanded the Douhetians explain why bombardment was fundamentally more destructive of morale than artillery barrages, floods, volcanoes or earthquakes. He referred once more to the 1923 Tokyo earthquake that killed more than one hundred thousand Japanese citizens and devastated the capital, but did not result in widespread popular unrest. Then Hellebronth offered another inconvenient example: Madrid, a capital on the front lines of a civil war subjected to both aerial and artillery bombardment, where life went on without a mass exodus. ‘These real examples testify to the capability of people to resist, and they show that people can bear great danger for short durations, as long as they can get their breath, without suffering societal breakdown.’ In the First World War, Habsburg civilians were subjected to ‘propaganda glittering with the hope of dissolution’ and suffered ‘ceaseless torment due to privation’, yet nonetheless persevered for years. On what grounds, then, did Douhet expect that just ‘a few minutes of isolated attacks would lead to the collapse of an entire country?’<sup>101</sup>

Szentnémedy had ignored this line of attack in his November 1936 article, and he never offered a satisfactory answer to Hellebronth’s query. The absence of a society-disintegrating mechanism was Douhet’s greatest conceptual weakness. He and his disciples simply asserted that large-scale aerial bombardment of population centres would necessarily cause such panic and chaos as to induce near-immediate surrender. That this had never happened did not moderate their conviction; it only strengthened their self-image as visionaries and caused them to regard sceptics as hopelessly backward, like the misguided Franco-Belgian airmen in *The War of 1919* \_\_\_. In fact, the lack of historical precedent was critical to survival of the theory: a thing never properly attempted cannot be considered to have failed.

---

<sup>101</sup> Ibid. p. 98.

In this regard adherents of Douhet are no different from those of Marx. Any supposed flaw in the great man's theory must be properly attributed to insufficiently zealous execution. It was therefore extremely unlikely that a Douhetian would find any argument from history persuasive, but to the open-minded, Hellebronth's approach could be very effective.

Technical objections—bombers are too small or slow, aiming is too erratic, explosive yield is too little—could be overcome or swept aside by the promise of future development (which in many cases was fulfilled). Hellebronth, by comparing the supposed effects of aerial attacks to the demonstrated results of long-term shelling or natural disasters, undermined Douhet's theory at its very foundation. When confronted with the central question of how aeroplanes wrought more emotional damage than artillery or earthquakes, Szentnémedy was silent.

That was rarely the case. For a decade Szentnémedy wrote extensively and well on all aspects of military aviation, and encouraged others to do the same. Under his leadership *Magyar Katonai Szemle* served as the Honvéd's sounding board for air power doctrine, a place where new ideas could be circulated, debated, amended, or discarded. In spite of his own remarkable productivity and activism on behalf of the independent aerial offensive, there is no sign that Szentnémedy stifled dissent. His editorial liberality and permissiveness make the disclaimers attached to Hellebronth's pieces all the more striking. Because of the importance of the topic and the intensity of the authors' views, that exchange was more spirited than others, but in terms of the seriousness with which it was conducted it was broadly representative. The high participation rate also speaks well of the journal's intellectual integrity. Over 150 authors contributed to the journal, including the esteemed

airman István Petróczy and future Arrow Cross leader Ferenc Szálasi.<sup>102</sup> Most authors submitted only a single item, which resulted in a wide range of air power issues being addressed. This chapter focused on a small selection of articles that illuminated the debate around Douhet's theory to the exclusion of much else. To take a single example, the July 1935 edition containing the second article on air defence that initiated the Hellebronth-Németh-Szentnémedy imbroglio featured pieces on new Italian fighters, the use of wood in aircraft production, and squadron flight formations. The blend of tactics, technology and theory was not repeated in every issue, but it was far from uncommon. With nearly one and a half million words having been expended in *MKSz*'s Aviation Bulletin, it seems certain that any deficiencies in the Hungarian air service could not have arisen from a lack of contemplation.

From too much contemplation, perhaps. Or rather, from an unhealthy ratio of contemplation to practical application, caused by external factors largely outside the flying corps' control. One reason Szentnémedy devoted so much ink to covering foreign aviation manoeuvres (approximately 17 pages per year) was that for most of the 1930s, Hungary was unable to conduct its own flight exercises. Some military flight activity had been performed even during the period of IMCC oversight, and opportunities expanded after the Allies ended the inspection regime, but they remained strictly limited in scope. In contrast, Italian pilots crossed oceans in mass formations that came to be known in English as *Balbos*, after the air minister who led them. Eventually the same RA fliers earned combat experience in East Africa and Spain, where they fought alongside Germans and against Soviets. British crews policed the empire from the air, Japanese pilots honed their skills in China, and

---

<sup>102</sup> I. Petróczy, 'A lengyel lég és gázvédelmi liga tevékenysége', *MKSz*, 7/1932, and 'Hogyan szervezte meg németország a polgári légvédelmet', *MKSz*, 1/1933. F. Szálasi, 'A légi erők befolyása a hadászatra', *MKSz*, 5/1932.

airmen of the Little Entente were free to observe, participate in, and conduct aerial manoeuvres as they wished. Not so the Hungarians. They were free only to read, write and argue about air power. All else—the hard work of transforming doctrine into capability—had to be done in secret. The next chapter describes the difficulties Hungarian airmen faced in expanding and modernising their air arm under adverse political, economic and legal conditions.

## Chapter 5

### Reality: 1927-37

For just over a decade, Hungary's aerial rearmament proceeded in fits and starts. The environment at the outset of the programme in 1927 seemed promising: political and military leaders agreed on the necessity of an air force, the Italian friendship treaty offered an instrument for acquiring aeroplanes, and aviation-minded intellectuals began to provide a theoretical basis for the service's employment. While these conditions remained relatively constant through the period, until the late 1930s Hungary did not see a substantial improvement in its diplomatic and legal standing, and its economic position deteriorated during the worldwide economic crisis. These problems complicated and slowed the efforts of Hungarian airmen to expand and modernise their service. Western aircraft companies were reluctant to trade with Hungary, and for those so inclined, Budapest's financial difficulties limited payment options. And because Trianon's prohibition against military aviation remained in force, such improvements they were able to achieve had to be concealed as commercial or sport aviation. These factors constrained Hungarian airmen as they sought to organise, equip and train a force capable of fulfilling the nation's foreign policy. Even so, by the end of 1937 the Hungarian air service had begun to emerge from the shadows, and with the covert assistance of Italy and Germany, to equip itself with a small number of modern aircraft.

The dynamics of this period illustrate the complex relationship between foreign policy and military power. The role of armed force in bolstering diplomacy was demonstrated repeatedly and persuasively even during those heady years immediately following the foundation of the League of Nations. Hungary's own experience in revolution and

intervention, the Italian seizure of Corfu, Japan's conquest of Manchuria, the Italian invasion of Abyssinia, and Germany's re-occupation of the Rhineland all served to buttress Defence Minister Csáky's point to the crown council ('In foreign policy it is military strength above all that defines power').<sup>1</sup> An active, and especially a revisionist, foreign policy required a credible armed force. The creation of that force may, as in this case, depend upon the ability of diplomats to loosen legal restrictions and to negotiate trade agreements, loans, and cooperative training arrangements.

Though the Italian treaty was a victory for Hungarian diplomacy, a symbol of the end of post-war isolation, its immediate results were disappointing. Contrary to the Foreign Ministry's expectations, Italian capital did not pour into the country, and Hungarian finance remained dependent on British investment. Nor did weapons flow freely from Rome to Budapest. On 1 January 1928, one of the early attempts at arms smuggling was foiled, when five train cars filled with machine guns and spare parts were intercepted by Austrian customs inspectors at the Szentgotthárd border crossing. This was a repatriation of sorts, since these items were among the matériel surrendered by Austro-Hungarian forces at the end of the First World War.<sup>2</sup> Nevertheless, the Little Entente was irate. The League of Nations investigation that followed concluded that the shipment was indeed a violation of international law, but that it posed little risk to Hungary's neighbours.<sup>3</sup>

The Szentgotthárd scandal epitomised the first year of the Italo-Hungarian relationship: it was a provocation to the region that provided very little increase in the strength of either party. The debut of Italian aeroplanes in Hungary was similarly inauspicious. Delivery of the

---

<sup>1</sup> See above, p. 110.

<sup>2</sup> Gy. Réti, *Hungarian-Italian Relations in the Shadow of Hitler's Germany, 1933-40* (Boulder, Col., 2003), p. 3.

<sup>3</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 86-7.

pair of Ansaldo AC-3 advanced trainers was long delayed, and the aircraft arrived in such poor condition that the accompanying Italian pilots refused to fly them. The type had already suffered twenty-two wing failures, they said, and the undercarriage was defective.<sup>4</sup> The grounded AC-3s were eventually exchanged for two airworthy Fiat CR-20s.<sup>5</sup> The relationship did improve after this rocky start, and Italian factories provided the bulk of the Hungarian air service's aeroplanes for the next twelve years. The twin problems of timely delivery and high quality never completely disappeared, however, and Magyar aviators sometimes had to choose between an inferior or obsolete Italian aeroplane or no aeroplane at all.

The Ansaldo/Fiat purchase was a result of a secret Bethlen-Mussolini meeting in Milan in April 1928. Their main point of discussion was joint support of the right-wing Heimwehr in Austria, whose ascent to power they believed would shift Vienna away from Paris and toward Rome-Budapest. Bethlen took the opportunity to press the Duce for a 300-million pengő credit and the option on 400 Italian aircraft.<sup>6</sup> Mussolini agreed, pushed perhaps by the possibility of closer Hungarian-German military relations. Italian diplomats were aware that, when Bethlen was in Rome to sign the Friendship Treaty, he had met with General Hans von Seeckt, the recently retired commander of the Reichswehr and the architect of its resurgence. They also knew that, in October 1927, von Seeckt had visited Hungary at Bethlen's invitation to consider the prospects for Hungarian rearmament. Spurred by competition, Italy's military attaché in Budapest offered a number of officer exchange programmes. After

---

<sup>4</sup> J. Csima, 'Olaszország szerepe a Horthy-hadsereg fegyverkezésében (1920-1941)', *HK* 16/1 (1969), p. 294.

<sup>5</sup> A. Sisa, 'A Magyar Királyi Honvéd Légierő olaszországi repülőgép-beszerzései', *HK* 115/4 (2002), p. 1051.

<sup>6</sup> The pengő replaced the korona in November 1925, at a rate of one pengő to 12,500 koronas. That made the pengő's value approximately equal to the pre-war korona. Nötel, 'International Credit and Finance', p. 196. The pengő-lira exchange rate in the 1930s was roughly 1:3.2.

much deliberation and negotiation, it was decided that Hungarian pilots would resign their Honvédség commissions and attend Italian flight schools as civilians. After the Szentgotthárd incident, Mussolini suggested an additional precaution: the Hungarians should renounce their citizenship and become, at least temporarily, Italians. Through these measures it was thought the scheme could avoid breaching the Paris Air Agreement and Trianon's Article 142.<sup>7</sup> The British Foreign Office learned of this plan and relayed it to Sir Ronald Graham, London's minister in Rome. In a cable marked 'Very secret', Whitehall generally agreed with Mussolini's legal analysis, yet deplored his judgement:

Our lawyers do not think that Article 142 prevents Hungarians from receiving aeronautical instruction in the air force of a foreign Power, provided they do not 'enlist (s'enrôler)' in it, unless indeed it were possible to maintain that the action taken amounted to sending an 'air or military mission' to Italy. We do not think that such a contention could succeed, especially as the second paragraph of the article makes it plain that the only obligation on Italy is not to employ Hungarians for the purpose of assisting or instructing in military training... It is probably the case that the framers of the article in question did not take into account such a contingency as that which has now arisen, as it seems clear that the object of the article was to prevent the spread of Hungarian military 'kultur'. It was not worded so as to prevent the Hungarians from *receiving* military training. As to whether Mussolini's action is inconsistent with the spirit of the article, there is in any case room for a difference of opinion, and Mussolini may be entitled to 'try it on' openly as he proposes to do.

As regards the first of his proposals, however, there is no getting away from the fact that they reveal the existence of a most discreditable and dangerous intrigue by Mussolini to violate the Treaty of Trianon by collusion between two of its signatories behind the backs of the other signatories, and it is greatly to be feared that the Hungarians will be far too short sighted to resist his overtures.

...The feeling here is that the best thing that could happen would be that we should learn of the arrangement by some avowable channel of information and thereupon represent to Mussolini and Bethlen the folly of the whole thing. Otherwise we are afraid that if this scheme succeeds both parties will be encouraged to work out others of a similar nature and to grow increasingly rash in the process until the Yugoslavs discover what is going on and produce a most unpleasant crisis by denouncing both Italy and Hungary to the League.

...The whole business shows Mussolini in a bad light and unfortunately is but another sample of his recent policy of giving secret and illegal help to those who in time

---

<sup>7</sup> B. Juhász, 'Olasz-Magyar vezénylések és tanulmányutak a két világháború között', *HK* 125/1 (2012), pp. 140-44.

of trouble would certainly not be friendly to the Serbs. The illicit imports of Italian war material into Hungary and Bulgaria are but other instances of this policy.<sup>8</sup>

This cable shows how much the Foreign Office knew about Hungarian attempts to skirt the air clauses of Trianon, and also how comparatively little it cared. It also demonstrates how easily international law can be dodged when one party is scrupulous to uphold it and the other motivated to subvert it. It seems that no 'avowable channel' presented itself, and rather than risk exposing its intelligence source, Great Britain did not confront Mussolini and Bethlen with the evidence of the illegal pilot training.

The plan to change nationalities proved too complex and was never executed. The LÜH instead sent its initial candidates to Italy as private individuals enrolled in a sport-flying course. The programme's pioneers were Lajos and Pál Batáry, brothers born in Fiume of an Italian mother. Although ostensibly taking civilian lessons, the Batárys in fact received advanced tactical training from Regia Aeronautica instructors, an arrangement much like the faux MALERT training operation established at Szombathely five years earlier. Lajos was sent to a fighter unit, while Pál trained on bombers. Care was taken to keep the brothers out of sight of foreign observers: they were not permitted to participate in the autumn manoeuvres, and Pál was moved from the 13th Bomb Regiment at Torino to the 7th at Lonate-Pozzolo for fear of discovery. The exact number of Hungarian pilots trained in Italy before 1938 is uncertain, because those air ministry records did not survive the war. Attaché reports and Italian documents refer to other trainees, however, so it is clear that the Batárys were not the only beneficiaries of Italian instruction in this period. Lieutenant Colonel Szilárd Schindler, the Hungarian attaché in Rome, learned to fly Caproni bombers, as did Captain Gyula Tost, who flew combat sorties over Abyssinia with the RA. One of the

---

<sup>8</sup> *DBFP*, Ser. 1a, Vol. 5, No. 32.

Hungarian service's chief inspectors, First Lieutenant Elek Ivánkovics, is recorded as attending a four-week course on fighter tactics.<sup>9</sup>

The pilot training programme and secret arms exports strengthened the Italo-Hungarian military ties, but the relationship was far from exclusive. Cooperation with Weimar Germany continued through staff visits and licensed manufacturing. In addition to the Udet 12a adopted in 1926, Manfréd Weiss had in 1928 purchased for 40,000 Reichsmarks the licence to produce twenty-five Heinkel HD-22 advanced trainers.<sup>10</sup> The HD-22 was used by the MALERT airmail section, which was in reality the air service's bomber squadron. Even as the Italians kept a close eye on German advances toward their new ally, a French flirtation nearly split the Budapest-Rome pairing. In 1928, the French general staff announced that the following year two Hungarian officers would be seconded to French forces. When questioned by Italian officials, the Defence Ministry suggested that it had simply responded to a French invitation. Upon further investigation by the Italian attaché in Paris, it was discovered that the request was initiated in Budapest. Quiet Italian intervention resulted in the French politely withdrawing their approval, and the Hungarian officers, one of whom was an airman on the clandestine air staff, never went to France. For the next two years, however, a pair of Honvédség officers did attend the French cavalry school at Saumur. Italy again objected, this time more strenuously. Lieutenant Colonel Schindler was summoned to the Italian war ministry, where he received a dressing down from a senior officer. The war minister, he was told, thought that further Italo-Hungarian cooperation should be suspended, since Hungary, which could not send its officers on courses in Italy due to financial constraints, managed to send them to France. Through a number of

---

<sup>9</sup> B. Juhász, 'Olasz-Magyar vezénylések', pp. 146-47, 160-61. Juhász makes extensive use of Italian military and diplomatic archives.

<sup>10</sup> L. Winkler, 'A magyar repülés története 1927-1945', HL Tgy 3.327.

miscommunications the disagreement escalated before finally being resolved weeks later. Though no lasting damage was done to relations with Italy, a possible Hungarian connection to France was severed. Budapest declined the next invitation from Paris. This incident, of minor significance in itself, shows the sensitivity of these countries to perceived shifts in power. Italy, fearing a loss of its own prestige and leverage should Hungary move marginally closer to France, forced Hungary to forgo a relationship that could have ameliorated its isolation. Hungary, the junior partner, had little choice, since the small diplomatic advantage that might be gained through exchanges with French forces was far outweighed by the concrete benefits in weapons and training the alliance with Italy offered.

Among the most important benefits of the burgeoning relationship with Italy was access to its aircraft industry. The original LÜH acquisition plan for 1930 included an order for twelve CR-20 fighters in addition to Caproni bombers. Fear that the pace of technological advance would soon make the Fiats obsolete caused LÜH officials to cancel the fighter contract and secure instead the production rights for the Ca-97, a single-engined light transport aeroplane easily converted to the bombing role.<sup>11</sup> The single prototype from Manfréd Weiss (WM) suffered from problems with steel-tube soldering as well as splits in the linen covering, and the Ca-97 never entered serial production. Gianni Caproni sent two Ca-101 aircraft as replacements and travelled to Hungary himself to advise WM on production techniques.<sup>12</sup> With the assistance of Caproni and experts from Fiat, Manfréd Weiss engineers finally mastered steel-tube construction, and even pioneered a method of varying tube cross-section and wall thickness to maintain structural stability at reduced

---

<sup>11</sup> B. Juhász, 'Olasz-Magyar vezénylesek', pp. 153-56.

<sup>12</sup> Sisa, 'MKHL olaszországi beszerzései', p. 1051.

weights.<sup>13</sup> In spite of this breakthrough, licence production of the Caproni aeroplanes was not resumed.

The novel technique was, however, put to use in WM's first independently produced trainer. The WM-10 resembled De Havilland's Moth, but was lighter than its British cousin due to the new tube construction, and was powered by a Hungarian-designed four-cylinder air-cooled engine. Unfortunately, it was a demanding machine to fly, and after two of the first ten production models were destroyed in crashes, it was withdrawn from the flight schools. The failure of the WM-10 was not a catastrophe for the LÜH: there was a suitable indigenous training aircraft in the fleet. The Székesfehérvár-Sóstó workshop had begun in 1928 to construct the Hungaria trainer, a slightly larger and heavier version of the Udet 12 Flamingó, powered by a licensed Siemens nine-cylinder radial engine. The Hungaria's extra weight decreased slightly its performance when compared to the Flamingó, but the domestic manufacturing saved fifteen per cent of cost without worsening the trade imbalance with Germany.<sup>14</sup>

Trade relations with the Dutch Fokker company remained strong. The LFT had flown Fokker fighters in the First World War, and MALERT's first successful routes had used the five-passenger F-III. Manfréd Weiss successfully manufactured fifty Fokker C-VD trainer/reconnaissance aeroplanes as well as a small number of fifteen-seat Fokker F-VIII passenger planes for MALERT. In 1930, the company ordered four D-XVI 'aerobatic aeroplanes' with an eye toward licensed production. The D-XVI was actually a modern fighter design, and French press coverage of its delivery (Hungary had ordered it with a

---

<sup>13</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 172.

<sup>14</sup> *Ibid.* pp. 170-71.

Gnome-Rhône engine) delayed the fourth aeroplane's arrival by a year and foreclosed the possibility of WM production.<sup>15</sup>

The Hungarian aircraft industry was proving itself a capable producer of foreign designs. But it had not shown the capacity to move a sophisticated domestic machine from the drawing board to the flight line, nor had it developed an engine strong enough to power more than the most basic training aeroplane. Many First World War Habsburg aircraft had been propelled by fine Austro-Daimler engines, but the imperial dissolution left no major engine works in Hungary. This was a serious shortfall, because 'an engine plant is primarily a precision machine tool shop, while an airframe plant is primarily a sheet-metal fabrication and assembly shop.'<sup>16</sup> Metal tube problems could be sorted out with a visit from more experienced experts; not so with engine fabrication anomalies. Even Germany, to whom Hungary would eventually turn for engine expertise, was dogged by its own aircraft propulsion deficiencies. Thus the WM-built Gnome-Rhône engines were absolutely critical to Hungary's aviation production. The French engines were themselves derived from the British Bristol Jupiter, which had its roots in the First World War. The Jupiter had been refined and improved in the decade that followed, and powered dozens of post-war aircraft models. From the Jupiter base, Gnome-Rhône developed its own series of radial engines, and sold rights to Manfréd Weiss for the manufacture of three versions: the K-7 Titan Major, a seven-cylinder plant capable of 370-horsepower; the nine-cylinder, 600-hp K-9 Mistral; and the K-14 Mistral Major, essentially two K-7s mated front to back, producing up to 1000-hp.<sup>17</sup> Manfréd Weiss engineers introduced a number of small improvements to the design that were adopted by the Bristol and Gnome-Rhône, including a simpler ignition

---

<sup>15</sup> Ibid.

<sup>16</sup> Homze, *Arming the Luftwaffe*, p. 82.

<sup>17</sup> B. Gunston, *World Encyclopedia of Aero Engines* (Cambridge, 1989), p. 71.

system, castor oil lubrication, and a cast cylinder head with more fins and therefore more efficient cooling. These modifications raised WM's international profile and earned back a bit of the licence fee.<sup>18</sup> One of these engines would power almost every aircraft built in Hungary through the end of the Second World War, with the exception of the Bf-109 and Me-210s.

Manfréd Weiss was the parent company of UFAG, Hungary's first aircraft manufacturing plant and its largest producer of aeroplanes in the First World War. The post-war restrictions and convulsions having made it nearly impossible to sustain a variety of aircraft producers, the Commerce Ministry decided to maintain Weiss and Magyar Általános Gépgyár (MÁG) as viable aviation firms. Other companies were not prohibited from joining the industry, as when Sóstó moved from repair to production with the Hungaria trainer, but government backing would be focused on WM and MÁG. The two companies reached an agreement with the Commerce Ministry that WM would handle small production runs of fifty or fewer aircraft, while MÁG would produce the larger series.<sup>19</sup> The arrangement was apparently reached amicably, but it proved to be much to WM's advantage: legal and budgetary restrictions in post-Trianon Hungary all but assured that the overwhelming majority of aircraft orders would be for fewer than fifty machines. MÁG, a primary contractor for Fokker and Berg fighters in 1914-18, was therefore effectively crowded out of the aircraft market, and in fact the company collapsed during the 1931 economic crisis. Aeroplanes were only a part of MÁG's industrial output, but the firm might have been saved from bankruptcy if contracts had been adjusted to spread work more evenly between WM and MÁG. A possible solution would have been for the companies to specialise in aeroplane

---

<sup>18</sup> L. Winkler, 'A Magyar Királyi Honvéd Légierő harci repülőgépeinek fejlődéséről', HL Tgy 3.643, p. 5.

<sup>19</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 166.

size or purpose (WM, for example, could have concentrated on engines and transport aircraft, MÁG on trainers). Efficiency was served by centralisation, but one lesson of the disastrous Knoller programme in 1915 was that diversification of product and producer was a strategic strength. This sub-optimisation of limited aircraft manufacturing capacity was not a serious failure on the part of Commerce or Aviation Bureau planners, but it does underline one area in which the staff officers did not adequately address earlier Imperial weaknesses.

The LÜH staff, under the leadership of Colonel Vassel since 1923, generally performed well during its long span underground. From the sanctuary of the Commerce Ministry its officers had seen the air service through the Allied inspections, preserving the seven disguised skeleton squadrons (three training schools, two meteorological and two airmail sections), stimulating domestic production of training aircraft, and arranging imports from Italy, Germany, Holland and Britain. They had also established a medical institute devoted to aviation-related maladies, a four-year aeroplane and engine maintenance school, a legitimate aviation weather service (separate from the clandestine fighter squadrons), and a university course for technical officers. The air service strength in October 1928 stood at 164 officers and civil servants and 719 other ranks. As a result of a Honvédség reorganisation it grew nearly 20 per cent within months, to a strength of 1,174 personnel in July 1929. In December 1929, Colonel Vassel was promoted to Lieutenant General and named chief inspector of the air service.<sup>20</sup> His successor at the LÜH was Colonel György Rákosi, whose term included the early phases of cooperation with the Regia Aeronautica, the setbacks caused by the worldwide economic crisis, and the intense debates about air power described in the previous chapter.

---

<sup>20</sup> Szabó, *MKHL, 1938-1945*, p. 11.

The effects of the crash of 1929 were just beginning to be felt in Hungary as General Vassel and Colonel Rákosi took their new posts in December. The next four years would be a ‘crisis of unparalleled depth’, as the economic calamity in the industrialised West led to a precipitous decline in global agricultural prices.<sup>21</sup> The worldwide wholesale price for wheat, for example, Hungary’s biggest export, dropped 70 per cent from 1929 to 1933.<sup>22</sup> The market for other agricultural goods also collapsed, leading to increased consumption of domestic produce and the erection of trade barriers. Germany, which increased its own area under cultivation during the crisis, raised its wheat tariff by 300 per cent after the 1930 harvest. Czechoslovakia, Hungary’s second best customer (after Austria) in spite of the political tensions between the two countries, declined to renew the trade agreement that expired that year. Thus 1931 exports to Prague amounted to only 4.2 per cent of Hungary’s total, compared to 16.8 per cent in 1930.<sup>23</sup> The value of those exports dropped from 45 million in 1931 to 7 million in 1932.<sup>24</sup> Imports from Czechoslovakia also fell, but only to just under half of the previous year.<sup>25</sup> So it went with other trade partners: total trade contracted (as did all other indicators of economic health), but exports shrank more than imports, exacerbating an already poor balance of payments.

In 1931 the crisis hit the Hungarian financial sector. The failure of the Austrian Credit-Anstalt bank in May sent tremors through Budapest, particularly since the Austrian institution was heavily engaged in Hungarian loans through the Magyar Hitelbank. Prime Minister Bethlen, fearing sagging public approval of the government party, dissolved

---

<sup>21</sup> I.T. Berend, ‘Agriculture’, in M.C. Kaser and E.A. Radice (eds.), *The Economic History of Eastern Europe 1919-1975, I* (Oxford, 1985), p. 177.

<sup>22</sup> Romsics, *Hungary in 20th Century*, p. 139.

<sup>23</sup> Macartney, *October Fifteenth, I*, p. 90.

<sup>24</sup> Z. Drabek, ‘Foreign Trade Performance and Policy’, in M.C. Kaser and E.A. Radice (eds.), *The Economic History of Eastern Europe 1919-1975, I* (Oxford, 1985), Table 7.XI, p. 498.

<sup>25</sup> Macartney, *October Fifteenth, I*, p. 90.

parliament six months early. He was returned with a large majority and for a few weeks his action seemed to have had the desired calming effect. In mid July, however, Danatbank failed, initiating a run on German banks.<sup>26</sup> ‘In the wake of one European crash after another, foreign lenders withdrew all credit lines that could be cancelled. Between 1st May and 13th July 1931 the Hungarian National Bank was obliged to pay out gold and foreign currency to a value of some 200 million pengős, which exhausted the country’s reserves.’<sup>27</sup> Bethlen instituted foreign-exchange controls and secured a new international loan, but could not solve the problem of servicing existing foreign debts in the face of reduced foreign earnings.<sup>28</sup> Under pressure from parliament for having failed to anticipate the banking crisis, Bethlen resigned on 19 August 1931, after ten years in office. He was replaced by Count Gyula Károlyi (a cousin of Mihályi Károlyi), whom Horthy had suggested to Bethlen as foreign minister in 1930. Károlyi retained nearly all of Bethlen’s ministers, and most of his policies. As a condition of further loans, the Financial Committee of the League of Nations insisted on various austerity measures to reduce government expenditures, including heavy cuts in civil service salaries. Standards of living fell across the country; only the very poorest rural labourers were largely unaffected, since they had effectively ‘dropped *en bloc* out of the economic equation, relapsing into a pre-monetary economy based on self-devised and self-sufficient barter.’<sup>29</sup>

The most direct and immediate result of the economic crisis for the Hungarian armed forces was a reduction in the pace of its secret rearmament. The 1929-30 aeroplane order from Italy was cut in half, from 11.6 to 5.6 million pengős, and the entire Italian credit line

---

<sup>26</sup> Ibid. p. 92.

<sup>27</sup> Romsics, *Hungary in 20th Century*, p. 139.

<sup>28</sup> E.A. Radice, ‘General Characteristics of the Region between the Wars’, in M.C. Kaser and E.A. Radice (eds.), *The Economic History of Eastern Europe 1919-1975*, I (Oxford, 1985), p. 52.

<sup>29</sup> Macartney, *October Fifteenth*, I, pp. 93-98.

for armament purchases in the 1930-31 fiscal year declined to 4.7 million pengős.<sup>30</sup> Arms sales around the world took a nose-dive during the crisis, dropping over 40 per cent from 1929 to 1933, although that decrease was less than the drop in total exports. The formidable Czechoslovakian arms industry was an exception. It saw a spike in arms exports in 1930, followed by a decline in 1931 to normal levels, a collapse in 1932, a recovery in 1933, and another sharp rise in 1934.<sup>31</sup> The healthy output of its adversary's weapons factories cannot have been comforting to Hungarian military planners.

Two other events occurred as a result of the crisis that would profoundly affect Hungary and the Honvédség. The first was the accession of Gyula Gömbös to the premiership; the second laid the foundation of eventual German economic dominance. Gömbös, last seen in these pages as a captain leading anti-Habsburg forces at Budaörs in 1921, had in 1928 been appointed Secretary of State for Defence, charged by Bethlen to cooperate with General Soós in drafting the plan for the expansion of the army. In 1929 he became the Minister of Defence following Csáky's sudden resignation. When Károlyi proved unable to garner significant popular support, the Regent in October 1932 asked Lieutenant General Gömbös (the rank had come with his elevation to defence minister) to form a government. In fact, Horthy, with Bethlen's help, formed most of the government, filling the posts with sound and cautious men expected to moderate Gömbös's Right Radicalism. In one important area, Horthy's shackling of Gömbös was successful. The secret societies with which Gömbös had been aligned his entire political life, the Hungarian Association of National Defence (*Magyar Országos Véderő Egyesülete*) and the Etelköz Association (*Etelközi Szövetség*), as well as his late political party, the Hungarian National

---

<sup>30</sup> Csima, 'Olaszország szerepe a fegyverkezésében', pp. 294, 295n.

<sup>31</sup> M. Hauner, 'Military Budgets and the Armaments Industry', in M.C. Kaser and E.A. Radice (eds.), *The Economic History of Eastern Europe 1919-1975*, II (Oxford, 1985), pp. 53, 56.

Independence (Racial Defence) Party (*Magyar Nemzeti Függetlenségi (Fajvédő) Párt*) were deeply anti-Semitic. Gömbös shared those views, and in the early 1920s ‘wrote pamphlets on international Jewry, freemasonry and kindred subjects, which hardly differed in style or content from Hitler’s own effusions’.<sup>32</sup> Nonetheless, once in power he passed no anti-Semitic legislation, instead reaching a secret agreement with the leaders of the Jewish Neolog Community, one of Hungary’s two Jewish bodies, that would secure their endorsement of his government. In his inaugural address, Gömbös appeared to reject his earlier anti-Semitism.

To the Jews I declare openly and frankly that I have changed my views. That part of Jewry that acknowledges that it shares a common fate with our People I wish to regard as brethren, just as I do my Magyar brethren.... I saw Jewish heroes during the war... and I know that they fought courageously. I know prominent Jews who pray for the Magyar fate, and I know that they will be the first to condemn that part of Jewry which could not or would not assimilate with the national community.<sup>33</sup>

Gömbös most certainly had not revised his views on the importance of Italy and Germany to effecting Hungary’s revisionist claims. Just three days after becoming prime minister, he wrote to Mussolini affirming his admiration for the fascist system and expressing his desire to continue the foreign policy of Bethlen; that is, one of cooperation with Italy in destabilising the Little Entente and diminishing French influence in the region. He also requested continued Italian assistance in the matter of importing arms and exporting wheat. A month later, he went to Rome to invigorate the relationship. There was renewed interest in the Italo-Austro-Hungarian customs union, and small arms deliveries intensified. This last development caused all three countries significant embarrassment after a shipment of rifles and machine guns from Italy bound for Hungary was discovered in an Austrian

---

<sup>32</sup> Macartney, *October Fifteenth*, I, p. 34.

<sup>33</sup> Quoted in T. Sakmyster, ‘Gyula Gömbös and the Hungarian Jews, 1918-1936’, *Hungarian Studies Review*, Vol. XXXIII, Nos 1-2 (2006), p. 164.

weapons factory awaiting refurbishment. The Hirtenberg incident, so named for the plant in which the arms were found, raised objections from Britain and France, and caused the Little Entente to strengthen their alliance. The weapons eventually were sent back to Italy.<sup>34</sup>

Italian-German relations were at this time quite strained, Mussolini being very concerned to protect Austrian sovereignty lest he share a border with an enlarged German Reich. Austrian officials did not assuage this concern. Vienna's military attaché in Rome warned Mussolini, 'If one time the Germans are able to breakfast in Innsbruck, that same day they'll want to lunch in Milan.'<sup>35</sup> Gömbös, the originator of the phrase 'Rome-Berlin axis', felt it his mission to bring his patrons together. A letter to Mussolini (whose chest, Gömbös liked to tell confidantes, was the same size as his own) included his belief that 'if Rome and Berlin, Budapest and Vienna would form a stronger alliance, they could play an important role in European politics.'<sup>36</sup> Gömbös did not live to see the Axis realised (he succumbed to cancer 1936), but he did more than perhaps any other Hungarian leader to push his country into alliance with Germany.

This push met with little resistance in its early years. The British minister in Budapest reported in 1930 that many Hungarian leaders favoured closer economic ties to Germany. 'The existing relationship is perfectly harmonious,' wrote Viscount Chilton, except for the lack of a commercial treaty, the conclusion of which 'is indeed of the highest importance to Hungary'.<sup>37</sup> Two years later that desire for a treaty had become desperation for a market. Germany had in 1931 relented temporarily from its refusal to import the Hungarian crop, taking nearly half of its annual surplus, but had not repeated the arrangement in the

---

<sup>34</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 103-5.

<sup>35</sup> Quoted in Fülöp and Sipos, *Magyarország külpolitikája a XX. században*, p. 172.

<sup>36</sup> Quoted in I.T. Berend, *Decades of Crisis: Central and Eastern Europe before World War II* (Berkeley, 1998), p. 310.

<sup>37</sup> *DBFP*, Ser. 1a, Vol. 7, No. 225.

following two years. In February 1934, the two countries signed a trade agreement that offered near-term relief at the expense of Hungary's long-term economic freedom, although this was not obvious at the time. Through this arrangement, instead of paying their German creditors directly, Hungarian debtors were to purchase Hungarian agricultural products with pengős they owed to German firms. Those goods were then exported to Germany, where the proceeds of their sale could be used to import certain manufactured items back into Hungary. This mechanism substantially increased Hungary's export trade with Germany, which in 1933 totalled 43.7 million pengős and rose the next year to 88.9 millions. Imports increased as well, although less dramatically, thereby giving Hungary what appeared to be a small balance of trade advantage (these were official figures that did not include the prohibited trade in arms; the favourable trade balance would disappear if armaments were considered).

It was not only quantitatively that Germany thus came to occupy a dominant position in Hungary's economy. She succeeded in interlocking Hungary's economy with her own in such a fashion that many Hungarian factories would simply have been unable to carry on production without the regular supply from Germany of raw materials, or in other cases, of certain machines, machine tools or spare parts. In other cases the Hungarian factories were only adapted to carry through parts of certain processes which had to be either begun or finished in Germany. This applied particularly to the armaments industry (the development of which in both countries was one of the objects of the agreements).<sup>38</sup>

Just months before signing this agreement that benefited their arms industries, both Hungary and Germany had been engaged in the League of Nations disarmament conference in Geneva. The defeated countries were already disarmed, and they accordingly introduced or supported efforts to implement the general disarmament called for in the imposed peace settlements. Their demobilisation had been justified in explicitly universalist terms: 'In order

---

<sup>38</sup> Macartney, *October Fifteenth*, I, pp. 141-42.

to render possible the initiation of a general limitation of the armaments of all nations'.<sup>39</sup>

The German foreign minister brought this to the attention of the League in a September 1931 address, reminding the delegates, 'The counterpart of the obligations assumed by Germany in 1919 is a formal undertaking on the part of the other states that disarmament by Germany should be simply a prelude to general disarmament by the other powers.'<sup>40</sup> In Budapest in July 1931, the Conference of the International Federation of the League of Nations Societies affirmed the 'principle of equality of disarmament between "vanquished" and "victorious" Powers'.<sup>41</sup> Of course 'equality of disarmament' was nothing more than a club to be used by Berlin and Budapest to bludgeon the West for its hypocrisy. German and Hungarian diplomats wanted to claim the moral high ground while working for their genuine goal, the recognition of their equal rights to rearmament. The victorious powers and successor states, however, rejected the accusations of hypocrisy, and insisted that they must maintain their defensive arms until all revisionist claims had been categorically renounced. Unable to find an agreeable level of armament, the Conference moved from the 'quantitative' question to the 'qualitative', the prohibition of particular types of weapons, including tanks, submarines, and aircraft. The most extreme example of qualitative disarmament was the proposal put forward in early February 1932 by French war minister André Tardieu, who became the premier later that month. Tardieu's plan called for placing heavy bombers under the control of an international air force, with national governments retaining control only of small defensive aircraft. The revisionist powers objected loudly, claiming that France aimed to perpetuate its military superiority under the authority of the

---

<sup>39</sup> *Treaty of Trianon*, Part V. Military, Air and Naval Clauses.

<sup>40</sup> Julius Curtius, quoted in Z. Steiner, *The Lights that Failed: European International History, 1919-1933* (Oxford, 2005), p. 764.

<sup>41</sup> Resolution quoted in J.W. Wheeler-Bennett, *The Disarmament Deadlock* (London, 1934), p. 8.

League, and Britain and the United States were cool to the idea of a supra-national armed force.<sup>42</sup> American president Herbert Hoover offered his own plan that entailed deeper cuts in arms, but without the ties of collective security arrangements. The plan suited neither of its wartime allies: France insisted on security guarantees, and Hoover's proposed reductions in ships and aeroplanes were more than Britain's imperial staff could stomach. In the meantime, internal politics caused Germany's position on equality of arms to harden, with the result that Germany threatened not to return to the conference after a scheduled adjournment if its right to rearmament were not recognised. Berlin did not carry the motion, and the conference adjourned after only reaching agreements that banned the use of chemical and incendiary weapons and the bombardment of civilian populations.<sup>43</sup>

Ferenc Szentnémedy, Hungary's most fervent promoter of the unrestricted aerial offensive, framed the debate as one between France and the Little Entente, who tied together disarmament and security for negotiations but truly opposed national equality of arms, and those countries, like Germany, Italy and Russia, who believed in practical disarmament and demanded real cuts in offensive forces. Arms inequality, Szentnémedy contended, invited trouble because unarmed countries put themselves at the mercy of their neighbours. The problem posed by aerial disarmament was especially acute, because air forces promised to be uniquely destructive. After six months of negotiations in 1932, the details of which he accurately recounted for *MKSz* readers, Szentnémedy observed that the Geneva conference had not produced any substantial positive outcomes. 'For this very reason', he concluded, 'it is legitimate to claim that the "devaluation" of the conquered must cease. The disarmed surely must be given the possibility for self-defence, at the same time, however, those who

---

<sup>42</sup> The Round Table, 'Disarmament', *The Commonwealth Journal of International Affairs*, 22:87 (1932), p. 545.

<sup>43</sup> Steiner, *The Lights that Failed*, p. 781-4.

aggressively and falsely are arming, must themselves disarm.’<sup>44</sup> Szentnémedy’s last sentence perfectly captured Hungary’s public position on the question of aerial arms. In *MKSz* and other publications he expounded on Hungary’s defencelessness from aerial attack, and the growing strength of the Little Entente’s air arms. A chart in his 1933 book *Aviation*, derived from League of Nations numbers and German estimates, showed the combined front-line combat strength of Czechoslovakia, Yugoslavia and Romania at over 900 aeroplanes. Hungary, ‘due to the peace treaty, has nothing’ (*A békeszerződés folytán semmi*).<sup>45</sup>

This claim was disingenuous. Not only were the Little Entente’s numbers purposely inflated by the reporting countries in order to minimise the effect of any League reductions after Geneva, Hungary had by 1932 managed to acquire a handful of capable combat machines, including the multi-purpose two-seat Heinkel HD-22s and Fokker CV-Ds, Fokker D-XVI and Fiat CR-20 fighters, and Caproni transport-bombers. In October 1931, the strength of its secret air force stood at six squadrons: three short-range and one long-range reconnaissance squadrons, and one each fighter and bomber training squadrons.<sup>46</sup> And further expansion was planned. Even as the distinguished Count Apponyi listened to Tardieu’s proposal in Geneva, in Budapest the Supreme Defence Council (*Legfelső Honvédelmi Tanács*, LHT) issued its blueprint for long-term development of the Honvédség. The LHT planned a 21-division motorised army and a 48-squadron air force. Of the forty-eight squadrons, twenty-one were programmed as bomber units, fifteen as reconnaissance, and twelve as fighter squadrons. Although it is not possible to trace exactly the intellectual origins of the 1932 plan, it likely was influenced by Szentnémedy’s 1931 injection of

<sup>44</sup> F. Szentnémedy, ‘A genfi leszerelési tárgyalások légügyi eredményei’, *MKSz*, 11/1932, pp. 98, 96.

<sup>45</sup> Szentnémedy, *A repülés*, p. 74.

<sup>46</sup> Winkler, ‘Magyar repülés története’, HL Tgy 3.327.

Douhet into the doctrinal debate. With nearly half of the squadrons dedicated to bombing, it was a decidedly offensive arm, and stood apart from its potential adversaries in the region, in whose forces fighters outnumbered bombers by as much as 4 to 1. Among the first concrete steps to expansion was the 1933 increase of 40 per cent in air service enlisted personnel, from 900 to 1,300 airmen, and a more modest increase in officers and civil servants to 191.<sup>47</sup>

This coincided with a rise in the published annual government subsidy to MALERT, from 200,000 to 300,000 pengős. Since MALERT functioned as a legitimate commercial endeavour in addition to its role as a false front for the Hungarian air service, it is impossible to completely disentangle the two organisations' sources of funding. The 300,000-pengő subvention acknowledged by Budapest was just a fraction of the total government expenditure laundered through the company's books. MALERT's growth since its establishment in 1922 followed the same pattern as that of the air service, and was dependent to nearly the same degree on diplomatic successes. The airline could also only acquire aeroplanes and open new lines when negotiations with foreign countries permitted. In the early 1930s its transport fleet consisted of nine Fokker craft (three F-IIIs, and two each F-VIIs, F-VIIIs and F-XIs), and six Capronis (four Ca-97s and two Ca-101s). MALERT's routes expanded in 1930-31, as the company began domestic service, first to Pécs and Kaposvár, then to Nyíregyháza and Miskolc.<sup>48</sup> The Pécs flight garnered national attention, with photographs in the press of MALERT's president, Prince Ferenc, and the Pécs county high sheriff, Ferenc Keresztes-Fischer (who would soon enter the cabinet as

---

<sup>47</sup> Szabó, *MKHL a második világháborúban*, pp. 18-19.

<sup>48</sup> Mulder, 'MAEFORT and MALERT'.

Minister of Interior), emerging from the Fokker.<sup>49</sup> International destinations doubled, with Venice and Klagenfurt added to the schedule.<sup>50</sup> This expansion was short-lived, and indeed 1932 saw a precipitous decline in MALERT's operations. In the two preceding years, the numbers of flights, passengers and miles flown had been nearly constant: just over a thousand flights each year, carrying around 3,500 passengers just under 108,000 nautical miles. In 1932 the numbers dropped by almost 40 per cent, climbing slightly the following year.<sup>51</sup> The domestic flights ceased in 1934, as did the service to Venice and Klagenfurt. It is unclear whether the changes were due to softening demand or increasing costs, but the Fokker aircraft were ageing, and by 1936 all but the F-VIIIs had been withdrawn from airline service (the F-VIIs and F-XIs were taken over openly by the air force).<sup>52</sup> The Heinkel HD-22s and Fokker CVs, thinly disguised bomber and reconnaissance machines, continued to carry mail between Budapest and Szombathely.

The failure of MALERT's domestic scheduled flights was not caused by a general apathy toward flying. Sport aviation had an avid following in Hungary during these years and figured prominently in public life. The pre-war Hungarian Aero Club (*Magyar Aero Szövetség*—MASz) had come back to life immediately after the departure of the Allied Aeronautical Commission in 1922. Air shows at regional airfields organised by private groups had tremendous appeal. In September 1924 the War Widows and Orphans Association hosted an air show at Kecskemét. One of MALERT's newly acquired Fokker six-seaters opened the day by scattering advertising leaflets over the city, and in the afternoon treated spectators to a parachutists' display. A similar event in Kecskemét in 1929

---

<sup>49</sup> *Képes Pesti Hírlap*, 18 Apr. 1930, in Winkler, 'Magyar repülés története', HL Tgy 3.327.

<sup>50</sup> Mulder, 'MAEFORT and MALERT'.

<sup>51</sup> MALERT forgalmi eredmények, MKKM 1563.

<sup>52</sup> Mulder, 'MAEFORT and MALERT'.

‘met with huge success’. In 1932 the Central Hungarian Automobile and Motor Club organised a larger event there. Seven sport aeroplanes participated, along with two MALERT Fokkers, in which 133 visitors were able to take a ride (more than a hundred others were in the queue when flying ended for the day). Distinguished guests included István Horthy, the Regent’s son and an experienced pilot himself, and the director of the LÜH, György Rákosi. Rákosi arrived in a Fiat BR-3 named *Justice for Hungary*, a gift from Mussolini meant as a replacement for Hungary’s most famous aeroplane that had been lost in a crash earlier in the year.<sup>53</sup>

The original *Justice for Hungary* was flown by György Endresz and Sándor Magyar across the Atlantic in July 1931. The record-setting ocean crossing was the most celebrated feat of Hungarian airmanship in the decades between the wars, and perhaps of all time. The stunt operated as part of Lord Rothermere’s campaign to assist Hungary in its quest for rehabilitation and revision. Measured in terms of sympathetic press coverage, particularly in the United States, the flight was a huge success. Christening the aircraft ‘Justice for Hungary’ was a stroke of publicity genius, because it all but ensured that every news item about the flight would print those words in a positive light, and public fascination with aerial exploits meant there was an eager audience. The late 1920s and early 1930s were the golden age of aviation—this was only the fifteenth non-stop trans-Atlantic flight—and it is unlikely that a ‘Justice for Hungary’ polar expedition or round the world sail would have garnered the same interest. For the aviators themselves, Lord Rothermere’s \$10,000 (£2,000) prize offered a tangible monetary benefit in addition to the promise of fame and the admiration of their countrymen.

---

<sup>53</sup> Kenyeres, *Kecskeméti katonai repülés története*, pp. 23-24.

Magyars living within Hungary contributed very little to the trip (\$45, according to one account); it was funded almost entirely by the sizeable Hungarian diaspora.<sup>54</sup> The idea originated in the offices of the *Detroit Magyar Hirlap*, and soon gained the support of the American Hungarian Federation. Endresz and Magyar travelled to America to raise funds for their flight. Nearly 8,000 Americans contributed, but the individual gifts were small.<sup>55</sup> After weeks of work, the two had collected just \$5,000, and had spent almost \$3,000 in the process. Then they met Emil Szalay, a Detroit meat processor, who had ‘a ten-year ambition to do something that would draw the favourable attention of the world to his native Hungary.’<sup>56</sup> Szalay’s father had served in the Habsburg army after it had crushed the 1848 Hungarian rebellion. He felt a lasting shame, and told his sons, ‘You must do something good for the Hungarian people to wipe out my disgrace.’ Szalay mortgaged his salami factory and handed Endresz and Magyar \$22,000 to buy an aeroplane.<sup>57</sup> The aircraft selected by their technical advisor Antal Bánhidi was a Lockheed Sirius 8A, a two-seat, low-wing monoplane powered by a 425-hp Pratt and Whitney engine, similar to the K-9 Mistral produced under licence at Manfréd Weiss. The Sirius was a sleek and modern machine with a smooth plywood skin, designed with input from Charles Lindbergh, who wanted a high-speed, low-drag aeroplane for his further global adventures.<sup>58</sup> *Justice for Hungary* carried its name and registration letters HA-AAF in stark white against the red fuselage as Endresz and

---

<sup>54</sup> \$45: Zs. Miszlay, ‘Az első magyar oceanrepülés’, <<http://www.historia.hu/archivum/2002/0207miszlay.htm>> accessed 21 Jan. 2014.

<sup>55</sup> ‘Aeronautics: For Hungary’, *Time*, 27 Jul 1931.

<sup>56</sup> ‘Budapest Flight Plan to Aid Hungary’, *New York Times*, 8 July 1930, p. 8. <<http://ezproxy.ouls.ox.ac.uk:3918/docview/98609904/1C0372CAA23841CEPQ/1?accountid=13042>> accessed 8 Mar. 2014.

<sup>57</sup> ‘Aeronautics: For Hungary’.

<sup>58</sup> ‘Lindbergh Picks a Plane’, *Popular Mechanics*, Nov 1930, pp. 803-4. <[http://books.google.co.uk/books?id=uOQDAAAAMBAJ&pg=PA803&dq=popular+mechanics+1930+aircraft&hl=en&ei=K\\_4aTczQDdOcnweLw7TEDg&sa=X&oi=book\\_result&ct=result&redir\\_esc=y#v=onepage&q=popular%20mechanics%201930%20aircraft&f=false](http://books.google.co.uk/books?id=uOQDAAAAMBAJ&pg=PA803&dq=popular+mechanics+1930+aircraft&hl=en&ei=K_4aTczQDdOcnweLw7TEDg&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=popular%20mechanics%201930%20aircraft&f=false)> accessed 8 Mar. 2014.

Magyar set out from Roosevelt Field, New York on 13 July 1931, on the way to Harbour Grace, Newfoundland, from where they would launch the trans-Atlantic flight.

György Endresz was an extremely experienced pilot. He had flown reconnaissance missions over the Balkans before transitioning to single-seat fighters later in the First World War. At war's end, he took command of the Győr squadron of mixed one- and two-seat aircraft and maintained that position through the Károlyi government and the Kun regime.<sup>59</sup> He then flew as a commercial pilot for Aero Express and Junkers, and served as a flight instructor for the MASz.<sup>60</sup> Sándor Magyar had been an observer in the war and joined the Szeged Whites before taking up a career as an airline pilot in Canada. Born Sándor Wilczek, his choice of adopted surname indicates he was either very enthusiastic about the programme of Magyarisation, or else possessed of a very dry wit.<sup>61</sup> Magyar was a skilled radio operator and navigator, and his use of radio stations as an aid to navigation was considered by some experts as 'only short of Lindbergh's famous exploit for precision.'<sup>62</sup> The pair's original plan had called for an arrival in Hungary by 20 August 1930 (a national holiday celebrating St. Stephen), but unusually bad weather across the Atlantic, forecast to extend through the winter, forced a delay.<sup>63</sup> They did move their staging ground nearer the ocean, departing from Flint, Michigan, Szalay's home town, on 30 September 1930 for New York.<sup>64</sup> During the weather delay, Endresz and Magyar found themselves at odds with

---

<sup>59</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, pp. 88, 128.

<sup>60</sup> 'Endresz György', *Magyar Életrajzi Lexikon, 1000-1990*, <<http://mek.oszk.hu/00300/00355/html/ABC03609/03756.htm>> accessed 12 Feb. 2014.

<sup>61</sup> Szeged, Wilczek: Veszényi, 'A magyar katonai repülés,' p. I/23; Canada: 'Hungarians to Fly Here', *New York Times*, 5 Sep. 1930, p. 12.

<sup>62</sup> 'Victory for Radio', *The Washington Post*, 17 July 1931, p. 3.

<sup>63</sup> 'Nincs kizárva, hogy tavaszra marad a "Justice for Hungary" amerikai startja', *Uj Nemzedék*, 24 Aug. 1930, p. 5.

<sup>64</sup> 'Hungarians to Fly Here', *New York Times*, 5 Sep. 1930, p. 12, <<http://ezproxy.ouls.ox.ac.uk:3918/docview/98897254?accountid=13042>> accessed 8 Mar. 2014.

Lockheed. The aircraft had been constructed with 650-gallon (2,800-litre) fuel tanks, but the factory test pilots had not conducted trial flights with full fuel. The Sirius had come off the production line behind schedule, and with Endresz and Magyar waiting to take possession, the full fuel flights were not accomplished. Endresz and Magyar were reluctant to do the test flights themselves, because they knew that two similar aeroplanes had crashed on takeoff with the same fuel load.<sup>65</sup> Lockheed proved unwilling to share the desired performance data, so Endresz drew on the expertise at the Budapest Technical University. Műegyetem calculations in hand, he and Magyar were eventually reassured that the aeroplane could take off safely and, provided fuel consumption were very carefully managed, could make the flight, which Magyar reckoned to take between twenty-six and twenty-eight hours. In the meantime, new radio navigation equipment was installed (paid for at a cost of \$4,000 by Lord Rothermere) and stronger landing gear fitted.<sup>66</sup> With the issues finally resolved and the return of suitable weather, *Justice for Hungary* left Roosevelt Field for a refuelling stop in Newfoundland before the 15 July 1931 launch of the non-stop ocean crossing. *Time* magazine described the flight for its American readers:

Forecast was poor visibility but favourable winds. Unafraid of blind flying, Endresz and Magyar took off. They scarcely saw the ocean during the 16-hour crossing. It was as predicted, a struggle with fog, rain and low clouds the whole way. But Navigator Magyar caught many radio bearings; the monoplane, another Lockheed, hit the coast of France only a trifle off course. They had estimated 26 hours flight to Budapest with two hours fuel to spare. But headwinds over Europe upset that. Just 25 miles short of the goal, at 12 minutes past the 26th hour, the Wasp motor gasped for gas. Endresz landed the plane in a rough field, damaging the undercarriage and propeller.<sup>67</sup>

---

<sup>65</sup> 'Leszállás nélkül akar Los Angelesből Csikágóig repülni Magyar Sándor és Endresz György', *Uj Nemzedék*, 28 Aug 1930, p. 10., in Winkler, 'Magyar repülés története', HL Tgy 3.327.

<sup>66</sup> A. Gibás, 'A magyar óceánrepülés', *Aero Historia* (Aug 1991), p. 4.

<sup>67</sup> 'Aeronautics: For Hungary'.

*Flight*, the magazine of Britain's Royal Aero Club, recounted the fliers' reception after they arrived in Budapest by way of a twin-engined Fokker sent to their forced landing site near Bicske:

They were accorded a stirring welcome by representatives of the Government and a crowd of about 100,000, and later they were driven through streets of cheering people to the Prime Minister's palace, where they were officially received by Count Bethlen on behalf of the nation. On July 20, Admiral Horthy, Regent of Hungary, received the airmen and decorated them with the Merit Order of the Third Class, and promoted them both to the rank of captain.<sup>68</sup>

Emil Szalay was on hand, as were Endresz's wife and son, along with Magyar's mother. Rothermere had wired the \$10,000 to Bethlen for presentation to the aviators.<sup>69</sup> The celebrations lasted for a week, and included an intimate brunch (dinner jacket, please) for 500 at Gundel in the St. Gellért hotel.<sup>70</sup> *Pesti Hírlap* published a special nine-page supplement chronicling the flight.<sup>71</sup> The festivities provided a welcome distraction from the worsening economic crisis.

In the months after the successful crossing, Magyar and his new wife moved back to North America, where they were met at the pier by a mayoral welcoming committee, their arrival in New York on a Cunard liner covered by the *New York Times*. Word of a row preceded them, but 'Captain Magyar denied that he and Endresz had quarrelled and were scheduled to settle their differences with rapiers.'<sup>72</sup> Although it did not lead to a duel, Endresz and Magyar had indeed fallen out, and therefore Captain Gyula Bittay replaced Magyar in the *Justice for Hungary* (the damage from the forced landing was repaired at

---

<sup>68</sup> 'Hungarian Atlantic Flight Succeeds', *Flight*, 24 July 1931, p. 730, <<http://www.flightglobal.com/pdfarchive/view/1931/1931%20-%200784.html>> accessed 18 Jan. 2014.

<sup>69</sup> 'Aeronautics: For Hungary'.

<sup>70</sup> Dr. Szentkirályi Ákos hagyatéka. MKKM 108.

<sup>71</sup> Gibás, 'A magyar óceánrepülés', p. 6.

<sup>72</sup> 'Captain Magyar Lands as an Immigrant', *New York Times*, 13 Nov. 1931, p. 4, <<http://ezproxy.ouls.ox.ac.uk:3918/docview/99248053?accountid=13042>> accessed 8 Mar. 2014.

Manfréd Weiss) for the May 1932 flight to Rome to attend the first Transoceanic Airmen's Congress.<sup>73</sup> On arrival at the Littorio airfield the Lockheed 'appeared to have been caught in an air-pocket when only 200 or 300 feet up. It side-slipped and crashed, bursting into flames.'<sup>74</sup> Both Endresz and Bittay were killed, and the *Justice for Hungary* completely destroyed. The ensuing investigation could not determine the cause of the crash, but from the descriptions it seems the probable cause was an accelerated stall, the result of attempting to turn too tightly with too little airspeed. A decade later the same error would cost the life of István Horthy, the Vice-Regent and, like Endresz, the nation's most famous airman at the time of his death. A hundred thousand Hungarians viewed the procession from the southern station to the funeral at the millennium monument, where Admiral Horthy led the official party.<sup>75</sup> Rome grieved with Budapest. Tens of thousands of Italians turned out to see the fliers' flag-draped caskets, and a crowd of similar size gathered at St Peter's for prayer. Air Minister Balbo, himself a trans-oceanic airman, was present at Littorio and personally arranged the transportation of the remains, while Foreign Minister Grandi conveyed his condolences to the Hungarian legation.<sup>76</sup> Mussolini expressed sympathy on behalf of the entire Congress in his speech, as did Sir Arthur Brown, the senior airman present and part of the first crew to fly the Atlantic.<sup>77</sup>

The intense Italian reaction to the *Justice for Hungary* is revealing. One Hungarian observer ascribed it to comradely affection. *Huszadik Század* described the Romans

---

<sup>73</sup> 'Aeronautics: For Hungary', *Time*, 30 May 1932.

<sup>74</sup> 'Oceanic Airmen's Congress. Hungarian Delegates Killed in Crash', *The Times*, 23 May 1932; p. 16, *The Times Digital Archive*.

<sup>75</sup> Gibás, 'A magyar óceánrepülés', p. 8.

<sup>76</sup> 'Szerdán délelőtt ¼ 11 órakor érkezik meg Endresz és Bittay koporsója a Délivasuti pályaudvarra', *Huszadik Század*, May 1932, <<http://www.huszadikszazad.hu/1932-majus/bulvar/szerdan-delelott-188-11-orakor-erkezik-meg-endresz-es-bittay-koporsoja-a-delivasuti-palyaudvarra>> accessed 9 Mar. 2014.

<sup>77</sup> 'Oceanic Airmen's Congress'.

‘mourning sincerely and truly from the heart’, and suggested ‘anyone who doubted that the Italians felt true sympathy to us Hungarians can now be persuaded just how deep is the love in the Italians for the Hungarians.’<sup>78</sup> Another factor may have been the prominent role of aviation in Fascist Italian culture. ‘The aeroplane and flight were among the Fascists’ most potent symbols.’<sup>79</sup> The contributions of Douhet, Caproni, Balbo and D’Annunzio have been discussed above. Less well known was Mussolini’s own close connection to aviation. He had learnt to fly in 1919, emerging from the aircraft in ‘enthusiastic delirium’. His role as ‘Italy’s exemplary aviator was also widely publicised.’<sup>80</sup> Like Hitler after him, he travelled widely by aeroplane while campaigning and ruling, and even had books written about his aerial exploits (for example, *Mussolini aviatore*, and *L’Aviazione negli scritti, nella parola e nell’esempio del Duce*). Not long after coming to power, Mussolini addressed the Italian Aero Club: ‘Not every Italian can or should fly. But all Italians should envy those who do and should follow with profound feelings the development of Italian wings.’<sup>81</sup> And indeed Italian aviation feats were a critical component of Fascist modernism. Italian racers set international speed records in the 1920s and won the Schneider Cup in 1926. Italo Balbo led massive formations on long-range flights intended to build up the regime’s prestige as well as prepare RA crews for strategic bombing attacks. The year before the Endresz-Magyar crossing, Balbo led twelve Savoia-Marchetti S-55 flying boats across the south Atlantic to Rio de Janeiro.<sup>82</sup> Italian public life was saturated with the idea of the pilot as an exemplar of

---

<sup>78</sup> ‘Szerdán délelőtt ¼ 11 órakor’.

<sup>79</sup> A. Gat, *Fascist and Liberal Visions of War: Fuller, Liddell Hart, Douhet and Other Modernists* (Oxford, 1998), p. 63.

<sup>80</sup> F. Caprotti, ‘Technology and geographical imaginations: representing aviation in 1930s Italy’, *Journal of Cultural Geography*, 25:2, p. 186.

<sup>81</sup> Quoted in *ibid.* p. 64. *Mussolini aviatore*, by G. Mattioli; *L’Aviazione negli Scritti, Nella Parola e nell’Esempio del Duce*, ed by Adriano Lualdi, cited in Caprotti.

<sup>82</sup> *Ibid.* p. 68-9.

Fascism, a noble and pure visionary leading the nation to glory. When viewed in this light, the *Justice for Hungary* crash was an assault on the notion of progress and technology.

In Hungary, even with Gömbös ascending, Fascist modernism did not gain traction in the cultural sphere. The legacy of agrarian aristocrats remained strong, and reaction against the Soviet Republic moderated the influence of the avant-garde. Furthermore, *Justice for Hungary* was from the beginning an attempt to garner attention and sympathy for what was already a national tragedy. Endresz and Bittay were mourned as national heroes, but their sacrifice just added to the ledger of catastrophe. The crash did give an extra emotional weight to the Italo-Hungarian relationship. In addition, the flight increased confidence in Hungarian airmanship and encouraged general aviation within the country.

Airmanship and revisionism were also bound together in the country's youth flying organisations. Both the Levente (a post-Trianon institution that offered para-military training under the guise of fitness and sport) and the Hungarian Boy Scouts were deeply nationalistic and revisionist, and each had flying wings in their association. Levente's gliding camps were less prominent, but were secretly and directly subsidised by the government.<sup>83</sup> The flying Scout troops had been able to purchase aeroplanes abroad for training while Hungary was still under Trianon's import restriction.<sup>84</sup> Its 'flying sub-camp' was a prominent component of Hungarian scouting's moment in the sun—the 1933 International Jamboree—and the organisational chart used military-type designations and hierarchies, with the Regent in overall command.<sup>85</sup> There were flight demonstrations, static displays of aeroplanes, and aircraft construction seminars. The Jamboree itself was a massive propaganda exercise in soft revisionism. The Scouts were instructed to present Hungary's case for the overthrow of

---

<sup>83</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

<sup>84</sup> E. Weaver, 'Revision and Its Modes', D.Ph. thesis (Oxford University, 2008), pp. 113, 115.

<sup>85</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

Trianon in compelling but non-threatening ways, and symbols and rituals served to shore up the Hungarian claim to the Danube basin.<sup>86</sup> Ties between Scouting and revision were not the result of conspiracy or government control, but was rather the natural expression of an organisation that explicitly promotes patriotism in all its national movements. That natural tendency was enhanced by the club's adult leaders, men of traditional and conservative outlooks, perhaps typified by Hungary's chief Scout, Count Pál Teleki. Teleki, according to C.A. Macartney, was 'at his happiest and best' when surrounded by Scouts, and his role as chief Scout was 'the occupation which perhaps lay nearest to his heart of all'.<sup>87</sup> Among the Scouts' flying instructors were many LFT veterans, and their 'general staff' included the well-known military and sport fliers vitéz Frigyes Hefty, István Hosszú, and Lajos Rotter.<sup>88</sup> The Hungarian Scouts began to take an active role in civil defence exercises from 1934 in cooperation with the national air defence command, providing first aid and operating alarm systems.<sup>89</sup> Their flight activity was generally confined to constructing and operating gliders, a sport somewhat ignored in the West, but developed to an extremely high level of sophistication in the defeated countries, particularly in Germany.

The exploits of German gliding pilots were already known to István Petróczy in 1921, and he had planned to fly in the Wasserkuppe rally during his study tour. In 1920 a sleek glider designed in part by the self-exiled Hungarian genius Theodor van Kármán flew for more than two minutes—an unofficial world record. If Petróczy had been present in 1921, he would have seen a glider fly for twenty-one minutes, another record. The next year the record was three hours. Wasserkuppe's gliders became a symbol of resistance to the Entente,

---

<sup>86</sup> Weaver, 'Revision and Its Modes', p. 125.

<sup>87</sup> Macartney, *October Fifteenth*, I, p. 222.

<sup>88</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

<sup>89</sup> I. Arady, 'Magyar cserkészlet és légoltalom', *Riadó!* 1/1 (Oct 1937), p. 28.

and gliding ‘a national duty’, according to a liberal German newspaper. In 1926 the lift properties of thermal updrafts were discovered (by accident—a pilot caught in a thunderstorm climbed to nearly 6,000 feet and glided over thirty nautical miles) and modern soaring was founded.<sup>90</sup> Western experts grasped the significance of the sport, as shown by one report from the RAF Quarterly:

Once again Germany has demonstrated the value of her intense cultivation of motorless flying, her answer to the limitations of the Versailles Treaty... The traditions of Richthofen, Boelke, Immelmann, and the rest were handed to the soaring pilots at the Wasserkuppe... Germany is building up a nation of airmen at very low cost—airmen whose knowledge of the air is of a far more intimate nature than anything perhaps dreamed of in aviation history.<sup>91</sup>

Hungarian gliding did not develop into a world-leading activity, nor did it attain the status of a centre of resistance as in Germany, but it did serve to introduce many young people (mostly, but not entirely men—István Horthy’s wife, among other women, earned her gliding certificate) to the principles of flight. The clubs were a good vehicle for nurturing air-mindedness, or in Petróczy’s words, ‘the awakening of the interest in aviation in every beautiful and impressionable spirit’.<sup>92</sup>

One unheralded member of the *Justice for Hungary* team was also deeply involved in the youth flying movements. Antal Bánhidi was an advisor to flying scout troops as well as an instructor and aircraft designer at the Budapest Technical University Sport Flying Club. Before joining Endresz and Magyar as technical advisor, Bánhidi was already an accomplished aviator. In 1929 he made a 2,700-nautical-mile journey to Sweden in a light aircraft, and in 1930 he first flew the Gerle, a two-seat biplane trainer of his own design

---

<sup>90</sup> P. Fritzsche, *A Nation of Fliers: German Aviation and the Popular Imagination* (Boston, 1992), pp. 109-15.

<sup>91</sup> S. Scott-Hall, ‘The Sailplane Capabilities at the Wasserkuppe, 1935’, *RAF Quarterly* Vol. 7, No. 1 (Jan. 1936), p. 27.

<sup>92</sup> See above, p 89.

underwritten by a 20,000-pengő grant from the MASz. The Gerle was a capable trainer and tourer, and sixteen were built in the next decade at the Műegyetem club. In 1933 Bánhidi and Tibor Bisits (the head of the 1933 Jamboree flying camp) were the first aviators to circumnavigate the Mediterranean, completing the 6,000-nm flight in Gerle No. 13.<sup>93</sup> Later that year, Bánhidi took Gerle 13 from Hungary to Scandinavia and thence to London, where he delivered a medal to Lord Rothermere in appreciation of his support of *Justice for Hungary*. Bánhidi's return to Debrecen in a single 900-nm, 11-hour hop impressed *Flight* as 'a very excellent non-stop flight, not an official record, of course, but certainly something which no one else has done.'<sup>94</sup> Gerle 13 was powered by a 100-hp Armstrong Siddeley engine, and the Coventry company took out an advertisement in *Flight* that featured Bánhidi's European trip.<sup>95</sup> In 1937 Bánhidi flew with the Archduke Albrecht around South America in Gerles Numbers 15 and 16. Bánhidi also appeared on the margin of Hungary's biggest aeronautical mystery: on 26 June 1941 he tried to intercept the unidentified aircraft that had just bombed Kassa. His CR-42 could not catch the attackers, and he was not able to determine their type or origin.<sup>96</sup>

One year after Bánhidi's visit to the UK, a group of British pilots made their way to Hungary. Arriving on 15 September 1934 in fourteen privately owned aeroplanes, the crews spent a week on the 'Magyar Pilota Pic Nic' organised by the Magyar Touring Club. The event attracted the attention of the highest levels of the Hungarian aviation establishment,

---

<sup>93</sup> 'Bánhidi Antal, Szatmárnémeti szülöttje', Magyar Közlekedési Közművelődésért Alapítvány, <<http://mkka.hu/historia/hiressegek/banhidiantal>> accessed 24 Mar. 2014.

<sup>94</sup> 'Croydon-Hungary Non-Stop', *Flight*, 21 Sep. 1933, p. 951, <<http://www.flightglobal.com/pdfarchive/view/1933/1933%20-%200609.html>> accessed 25 Feb. 2014.

<sup>95</sup> *Flight*, 26 Oct 1933, p. ix, <<http://www.flightglobal.com/pdfarchive/view/1933/1933%20-%200849.html>> accessed 25 Feb. 2014.

<sup>96</sup> A. Bánhidi, 'Egy volt vadászpilóta visszaemlékezése 1941. június 26-ára', HL Tgy 2815.

with the Archduke Albrecht and LÜH director Rákosi greeting the arrivals at Mátyásföld. The programme was innocuous and included stops at Hungary's best-known tourist locations (baths and csárdás at almost every stop), but the group was well-escorted at all times, an indication of the importance accorded the development of aero-tourism and Anglo-Hungarian relations. Although travelling as a private citizen, among the British aviators was a senior RAF officer, Group Captain R. Leckie, who presumably took a special professional interest in the current state of Hungarian aviation.<sup>97</sup> The journey was repeated in the next two years in a similar way, with the party landing on the plain at Hortobágy, at Debrecen, Szeged and Siófok. Royal participation was provided in 1935 by Duke Francis Hohenlohe and in 1936 again by Albrecht, now flying his own aeroplane. István Horthy also assumed a large role in the visits, leading the earliest-arriving Britons to landing at Mátyásföld in a WM trainer. The British contingents each year included RAF officers.<sup>98</sup>

The LÜH recognised the economic, technological and publicity value of foreign aviators flying private aeroplanes across Hungary, and it established a special office to encourage aviation tourism. The director of the Foreign Tourism Office was Count Nándor Zichy, a former military pilot and avid sport flier, who worked closely with Dr. Ákos Szentkirályi, a retired colonel of cavalry and lawyer who led the propaganda office of the MASz. Together they sponsored a series of international fly-ins, capitalising on the natural beauty of Lake Balaton to attract pilots. In 1936, the second annual Balaton Star Tour (so named because of the pattern formed by the sequential out-and-back flights around the

---

<sup>97</sup> 'Magyar Pilota Pic Nic', *Flight*, 27 Sep. 1934, pp. 1003-4, 1028, <<http://www.flightglobal.com/pdfarchive/view/1934/1934%20-%201001.html>> accessed 12 Jan. 2014.

<sup>98</sup> E. Nagy, 'Hungarian Holiday', *Flight*, 8 Aug. 1935, <<http://www.flightglobal.com/pdfarchive/view/1935/1935%20-2-%200169.html>>; and 'Hungarian Interlude', *Flight*, 2 July 1936, <<http://www.flightglobal.com/pdfarchive/view/1936/1936%20-%201811.html>> both accessed 12 Jan. 2014.

country) drew sixty-four aeroplanes with crews from Austria, Belgium, Czechoslovakia, France, Germany (the best represented), Great Britain, Italy, Poland and Switzerland. Szentkirályi was indefatigable in his efforts to promote general aviation in Hungary. He had a robust propaganda plan for each year, gave numerous interviews, and spoke at MASz and other club meetings around the country. Outreach to other Hungarian associations was noteworthy: the Magyar Athletikai Club founded a flight section and joined the MASz and LÜH in hosting the Balaton Star Tours, and in 1931 MASz and the Reviziós Liga issued joint press releases congratulating the crew of *Justice for Hungary*. Although it was not an overtly revisionist organisation, MASz's official letterhead carried the revisionist creed:

<i>Hiszek egy Istenben,</i>	I believe in one God,
<i>Hiszek egy hazában!</i>	I believe in one country!
<i>Hiszek egy isteni örök igazságban,</i>	I believe in God's eternal justice,
<i>Hiszek Magyarország feltámadásában!</i>	I believe in Hungary's resurrection! <sup>99</sup>

As the 1930s wore on, the veil surrounding secret Hungarian aerial rearmament began to slip. In the early part of the decade, the indiscretions were small. Légügyi Hivatal officers began to wear uniforms and decorations in 1930.<sup>100</sup> Dr Rákosi wore this uniform and was identified as a general in the photographs that accompanied the 'Pic Nic' article in *Flight* magazine. If the incongruity of a uniformed general directing the 'aviation bureau' of a country denied an air force caused British readers any consternation, it went unrecorded. Likewise, the major English-language papers that covered the *Justice for Hungary* flight referred repeatedly and blithely to the military ranks of Endresz and Magyar. In these minor matters, as in all things related to illegal rearmament, Hungary tended to follow a step or two behind Germany, so that Budapest's transgressions seemed familiar and therefore inconsequential when laid against Berlin's. German attempts to circumvent the proscription

<sup>99</sup> Dr. Szentkirályi Ákos hagyatéka. MKKM 108.

<sup>100</sup> Kenyeres, *Kecskeméti katonai repülés története*, p. 23.

of its air force were not accepted, but they were expected, as evidenced by the air attaché's report that began, 'Naturally however the virile, martial-minded, German people have not yielded willingly to such a drastic reduction in their scale of armaments'.<sup>101</sup> The Foreign Office was aware of the secret Luftwaffe base at Lipetsk in the Soviet Union.<sup>102</sup> A memorandum prepared for British negotiators at Geneva concluded, 'Although Germany is forbidden to possess any military or naval air forces, there is abundant evidence to show that in fact she possesses at least the nucleus of an efficient military air force camouflaged within the organisation of her powerful civil aviation.'<sup>103</sup>

That, of course, was precisely the Hungarian aspiration. The difficulty lay in the adjectives. Hungary's camouflaged military air force was not particularly efficient, and her civil aviation could not be described as powerful. Hungary did have a core of notable aviators, its public remained enthusiastic about and engaged in aviation, and its government was able to harness this air-mindedness to further its nationalist and revisionist aims. However, the Hungarian aviation industry could not build itself into a regional air power, and its ability to acquire an air force abroad was restricted by international treaties, by its own financial limitations, and by the scarcity of suitable suppliers.

Certain changes in the European political landscape did seem to favour Hungarian rearmament. The rise of Hitler to the German chancellorship broadened an avenue of support, and Germany's withdrawal from the League of Nations and its subsequent declaration of equality of armaments served to weaken the case for the continued disarmament of the other former Central Powers. Gömbös, the originator of the idea of the Berlin-Rome Axis, was determined to capitalise on these changes. In Gömbös's mind the

---

<sup>101</sup> *DBFP*, Ser Ia, Vol. 7, No. 102 enclosure.

<sup>102</sup> *Ibid.* No. 265.

<sup>103</sup> *DBFP*, Ser II, Vol. 3, appendix IV.

axis should run through Hungary, whose position in the Danubian basin would provide a buffer between the two great powers' spheres of influence.<sup>104</sup> As soon as he was able, Gömbös went to Berlin to pitch his idea to the Führer. His visit in June 1933 was preceded by Count Bethlen's trip in March. Bethlen travelled as a private citizen (as did Gömbös in June), but his task was to prepare the ground for the sitting prime minister. The Hitler-Gömbös meeting was short and informal, but Gömbös made a good impression, in spite of his impolitic defence of an independent Austria and Hitler's anti-Hungarian prejudice. Hitler promised to buy more Hungarian agricultural products and sell it more military hardware, and suggested that Hungary could have what it wanted from Czechoslovakia, but he warned Gömbös to leave Romania and Yugoslavia alone. The Führer did not embrace the Axis, and he gave only a limited endorsement of Hungarian revisionism. The encounter did yield important economic agreements and opened the door for more German weapons, the first of which were light howitzers and sport aeroplanes.<sup>105</sup> Gömbös did not abandon his quest for German-Italian rapprochement, because he saw it as absolutely essential to Hungary's future. If Hungary were successful in playing matchmaker between the two, it would buttress both countries' aid for its territorial claims. If, on the other hand, Berlin and Rome became antagonists, one of them would invariably look for the backing of the Little Entente, which would be fatal to Budapest's ambitions. At the same time, Hungary feared German dominance and was dedicated to keeping Italy and Austria as counterweights.

A slew of diplomatic crises and continuing budgetary shortfalls in 1934 frustrated the hopes of Gömbös and the Defence Ministry regarding increasing the pace of rearmament.

Germany felt aggrieved by the Rome Protocol signed in March enhancing political and

---

<sup>104</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 108.

<sup>105</sup> Macartney, *October Fifteenth, I*, pp. 138-43; Bethlen's trip: Gy. Juhász, *Hungarian Foreign Policy*, p. 110.

economic cooperation among Italy, Hungary and Austria, and neither Gömbös nor Horthy could convince Hitler that the agreement was not directed against the Nazi state. The summer brought an attempted National Socialist putsch in Austria, which resulted in the death of the Austrian chancellor Engelbert Dollfuss, and raised fears in Budapest (unfounded, as it turned out) of an Italian-German conflict. The French-Little Entente stance was strengthened by the emergence of the Soviet Union from diplomatic isolation and its admission to the League of Nations. The prospects of a Franco-Soviet alliance as well as the attempted coup in Austria caused Rome to cast its eyes toward Paris, a development naturally resented in Budapest. The year's second notable political assassination further undermined Hungary's position. King Alexander of Yugoslavia and French Foreign Minister Louis Barthou were killed by a Macedonian terrorist in Marseilles in October. The assassin had been trained by Croatian Ustaša separatists, who had themselves trained on an estate in south-western Hungary with the government's knowledge.<sup>106</sup> The Ustaši had been expelled before the Marseilles attack, and there was no evidence that the Hungarian government was involved in the deaths of Alexander and Barthou, but it nonetheless earned Hungary opprobrium in the West and 'left her in the position of general scapegoat for sins the worst of which were Mussolini's.'<sup>107</sup> Although the League ultimately rejected Yugoslavia's demand for international sanctions against Hungary, the furore had increased international scrutiny and eroded foreign support, both of which made arms purchases from abroad nearly impossible. The feeling of being again alone in the world solidified Gömbös's domestic standing.

---

<sup>106</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 115-18.

<sup>107</sup> Macartney, *October Fifteenth, I*, p. 146.

The LÜH discarded as unachievable its 1932 plan for forty-eight flying squadrons. According to a 1934 staff study, the maintenance of a force of just eighteen squadrons would cost 16 million pengős, which was more than the budget could bear. Spending constraints, combined with the sour turn in Hungary's diplomatic fortunes and the realisation that the CR-20s purchased just three years ago were already out-dated, dictated a pause in aircraft acquisition. The defence ministry chose to spend its Italian arms credits instead on light tanks from Ansaldo.<sup>108</sup> Perhaps partially in response to this decision, the LÜH submitted a memo in March 1935 to the chief of staff arguing for a larger allocation of the Honvédség budget, noting that it received only 6.5 per cent of defence spending, while the Czechoslovak air service got 10 per cent and the Romanian an astounding 31 per cent. This document also included an assessment of the aerial arm's mission. 'The air force command,' it read, 'directs itself to this ultimate goal: to be able to act as a serious opponent against at least one of the LE states surrounding us' (*minket környező kisentente-államoknak legalább egyikével szemben komoly ellenségként léphessünk fel*).<sup>109</sup> The declaration cast the air force as a distinctly offensive weapon and also defined the range and scope of the expected adversary (one or possibly two Little Entente members, but not all of them at once). The memo urged continued modernisation and expansion of the bomber fleet (which at the time consisted of two-seat biplanes and the handful of Capronis), which would function 'independently before the initiation of general military operations, then in strict cooperation with the ground forces to contribute to a decisive engagement.'<sup>110</sup> This signalled a qualified acceptance of Szentnémedy's Douhetism. The LÜH agreed that bombers should

---

<sup>108</sup> Csima, 'Olaszország szerepe a fegyverkezésében', p. 298.

<sup>109</sup> Szabó, *MKHL, 1938-1945*, p. 19.

<sup>110</sup> *Ibid.*

predominate and that they should be used autonomously at the beginning of the war, but it did not suggest that the bomber offensive alone would bring about a decision.

Out of this message came a new plan for the existing six squadrons to grow to fifteen. The three sport clubs would provide the cadres for four night-bombing squadrons, while three light bomber squadrons would be formed from the flight schools and the Sóstó research unit. Kaposvár's existing short-range reconnaissance unit would make two additional light bomber squadrons, with its mission being taken up by new observation squadrons based at Pécs and Miskolc. Pilots from the current fighter squadron ('Meteorological Section') would split into three units. With nine of fourteen units expected to fly bombers, it was a distinctly offensive organisational plan. This concept was approved by the defence ministry and became part of its 'Arpad' rearmament scheme.

In March 1935, the LÜH ordered from Italy twenty-six aircraft, including nine three-engined Ca-101/3m transport/bombers (powered by WM-produced K-7 engines) and a pair of Caproni fighters for trials. Three more Ca-101/3ms were ordered in exchange for the Italian production rights to the Hungarian Gebauer motor-driven aeroplane cannon.<sup>111</sup> In addition, Captain Mihály Nagy was sent to Italy to visit factories and examine aircraft for possible purchase. After numerous test flights and inspections, Nagy recommended taking the CR-32 fighter under contract, with an additional three types—the A.P 1, Br-64 and Ro-37 day bombers—for further trials.<sup>112</sup> The CR-32 order expanded to twenty-six aeroplanes in 1935 and, with the awarding of a 93-million-lira credit in 1936, grew to fifty-two.<sup>113</sup> Eventually six Hungarian fighter squadrons would be equipped with the CR-32, which served well until the early 1940s, and in which a Hungarian pilot would claim the country's

---

<sup>111</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

<sup>112</sup> Sisa, 'MKHL olaszországi beszerzései', p. 1053.

<sup>113</sup> Csimá, 'Olaszország szerepe a fegyverkezésében', pp. 298-300.

first aerial victory since 1919. The Ca-101/3m was less successful. It was intended to fulfil the night bomber combat role, but its performance, even with three engines, was less than impressive, although it did look the part of a civilian airliner in MALERT colours.

Delivery of the Fiat and Caproni aeroplanes slowed in late 1935 when Italy invaded Abyssinia. The importance of the Italian arms trade to Rome's diplomatic efforts was secondary to its role as a supplier of aircraft to the Regia Aeronautica, and some of the machines promised to Hungary made their way to Eritrea and Somalia instead. Italian forces there mustered 168 aircraft for the 3 October 1935 assault, and there was no Abyssinian air force to combat them. In the course of the war the RA flew 4,500 combat sorties, dropped nearly two million kilograms of bombs (mostly 2.5 kg anti-personnel types), and delivered one million kilograms of supplies, losing only eight aircraft and forty-eight airmen in the process.<sup>114</sup> Given the high accident and casualty rates of peacetime and training flights at the time, the RA's low loss rate in Abyssinia was remarkable. The contribution of Italian air operations to eventual victory and the future implications for air warfare were somewhat less clear. Army leaders and some military commentators highlighted the close cooperation between fast-moving land forces and reconnaissance and attack aircraft in overcoming Abyssinian resistance, while RA leaders (Mecozzi was a notable exception) found validation for Douhet's theories in the RA's ability to attack when ground offensives stalled.<sup>115</sup> Ferenc Szentnémedy agreed with the latter assessment. In his September 1936 analysis of the Abyssinian war, he quoted Douhet's own one-line summary of his theory: 'Defend on the land and sea, attack in the air.' Szentnémedy continued, 'Domination in the air is required—

---

<sup>114</sup> Gooch, *Mussolini and his Generals*, pp. 311, 372; sortie count and bomb type: F. Szentnémedy, 'Az olasz repülőerők működése Abessziniában', *MKSz*, 9/1936, p. 114.

<sup>115</sup> Gooch, *Mussolini and his Generals*, p. 375.

everything else is secondary. Is that the whole of it? Roughly, yes.’<sup>116</sup> The Abyssinian army was destroyed and its capital occupied in only seven months, thanks in large part, he contended, to the air force. The victory could not, however, be considered a full vindication of the idea of independent air warfare, because Abyssinia lacked the necessary urban population and industrial centres whose destruction would lead to capitulation. It was for that reason that the Italian army had to engage Abyssinian forces. Because of this, the action was worthy of further reflection: ‘The Italian war offered a wealth of extraordinarily valuable experience in relation to developing aerial leaders. Douhetism depreciated in value not at all in the course of the Abyssinian war, and the experience of the war must be taken into account in European military doctrine.’<sup>117</sup> There were also practical lessons to be learnt. In an earlier article Szentnémedy had focused on tactical operations, including sketches of various RA aeroplanes. His mention of the use of the ‘eminently tested’ three-engined Ca 101 in both bombing and reconnaissance missions would have been particularly interesting to readers aware that this aeroplane was the backbone of the clandestine Hungarian air service’s bomber fleet.<sup>118</sup> He later drew attention to RA’s use of parachute-delivered supplies, detailing the simplicity and reliability of the 1.5-metre ‘iron torpedoes’ that could deliver up to 200 kilograms of goods. According to Szentnémedy, the Italian parachute supply expertise extended to live cows and goats delivered under their own silk canopy. Aerial re-supply would make planners revisit the commonly held assumption (affirmed by General Ludendorff) that offensives could advance only seventy-five miles without a logistical pause.<sup>119</sup>

---

<sup>116</sup> Szentnémedy, ‘Az olasz repülőerők Abessziniában’, p. 102.

<sup>117</sup> Ibid. p. 116.

<sup>118</sup> F. Szentnémedy, ‘A repülők szerepe az olasz-abesszin háborúban’, *MKSz*, 4/1936, p. 107.

<sup>119</sup> Szentnémedy, ‘Az olasz repülőerők Abessziniában’, p. 114.

The importance of aerial re-supply also figured in the first *MKSz* article about the Spanish Civil War. Elemér Tóth, who had previously written for the journal about transport and parachute operations, noted that airlifted supplies had allowed Nationalist troops to withstand the siege of Alcazar. The majority of Tóth's report, which was based on an account in the French journal *Revue de l'Armée de l'Air*, was concerned with assessments of fighter and bomber employment. As in Abyssinia, the performance of Italian, and increasingly German, aeroplanes was closely scrutinised. The Fiat CR-32 was judged to be quite vulnerable due to its water-cooled engine and the placement of the fuel tanks in the fuselage, which increased the chance of fire and thereby decreased the possibility of a successful forced landing or escape by parachute. The Junkers Ju-52, which MALERT would soon add to its fleet, was a purpose-designed passenger aeroplane converted into a bomber for use by the German Condor Legion. Its airliner origins complicated the efforts to retrofit defensive armament, which left it susceptible to enemy fighters. The bombers therefore were given close fighter escort, on occasion at a nearly 1:1 ratio (for example, a December 1936 raid on Madrid comprised twenty-five Ju-52s and twenty-three accompanying Heinkel fighters). One French pilot described a particularly effective Nationalist tactic: ten to twenty fighters would attack a certain position with machine guns and small bombs while the Nationalist ground forces prepared to attack. When, after the air strikes, it seemed that the opposing force's spirit was broken, the infantry attacked, with continuing support from the air.<sup>120</sup> This tactic would be used to great effect in Poland, France and the Soviet Union in the coming years.

A subsequent piece focused on the size of the forces involved, especially the tendency toward large air battles consisting of sixty to eighty aeroplanes on each side. That meant

---

<sup>120</sup> E. Tóth, 'Légiháború Spanyolországban', *MKSz*, 6/1937, pp. 97-104.

nearly a third of operational Nationalist aircraft were committed to battle at one time. *MKSz* estimated Republican ('Red') air strength by the end of 1937 to be approaching 1,000 aircraft, with the Republican fleet being weighted more heavily toward fighters (approximately a 3:1 fighter-to-bomber ratio) than the Nationalists. Another ratio mentioned was the proportion of Nationalist flying squadrons to infantry divisions, which at roughly 1:1, signalled an insufficient aerial component (the 1932 plan envisioned forty-eight squadrons for the Honvéd's twenty-one divisions). To counter the Republicans and achieve success in the air, the number of Nationalist squadrons should be tripled to around one hundred, of which almost half should be bomber squadrons, one-third fighter squadrons, and the remainder reconnaissance. Author András Sólyom listed twelve conclusions that could be drawn from the Spanish war experience through the middle of 1937. The first was that although both sides fielded modern machines, much obsolescent equipment was also in use. This was an important insight that corresponded with Hungarian experience in the First World War, where old models continued to fly productively in the east well after the types had been withdrawn from service on the Western Front. He also rightly observed that all modern fighters should have retractable landing gear for greater speeds, that metal skins and air-cooled engines were more rugged than fabric covers and motors requiring radiators. Sólyom's judgement was shakier on a pair of critical points: the expectation that normal fighter armament would not exceed the 8mm calibre, and that superchargers were of limited utility because fighters would rarely fight above 15,000 feet.<sup>121</sup> Both of these conclusions were badly misguided. Because Hungarian aircraft choices were so severely constrained by what its allies made available, however, it cannot be said that the lack of foresight had significant negative effects on acquisition policy. In general, it can be said that Hungarian

---

<sup>121</sup> A. Sólyom, 'A Spanyol háború a légierők szempontjából', *MKSz*, 3/1938, pp. 120-25.

airmen were well informed regarding contemporary aerial operations, and that they studied the Abyssinian and Spanish wars with a mind toward future air warfare. Journal articles, however faithfully reported and read, were no substitute for actual experience, and the inability to apply practically the lessons derived vicariously was a severe handicap.

Hungarian interest in the German experience in Spain was particularly keen because the door had been opened to increased defence cooperation with Berlin. Prime Minister Gömbös had long wanted to push Italy and Germany to closer relations for Hungary's benefit; events in 1935-36 brought his dream to fruition. First Hitler unilaterally rejected the military clauses of Versailles, at one blow unleashing Germany's considerable armament production and weakening Trianon's legitimacy. Mussolini then made overtures to Hitler in order to minimise Italian vulnerabilities after the beginning of the Abyssinian campaign. Finally, Italo-German cooperation in Spain clinched the deal. The Rome-Berlin Axis was established in a 25 October 1936 secret protocol pledging the two Fascist countries 'to deal with the political and economic problems of the Danubian basin in the spirit of amicable collaboration.'<sup>122</sup> Gömbös did not live to see it, having succumbed to kidney disease in Munich on 6 October.<sup>123</sup> Even before the formalisation of the Axis, Gömbös's foreign policy had certainly loosened wallets in Rome and Berlin: the 93-million-lira credit from Italy was followed by a 28-million-Reichsmark line from Germany. Using that credit, the LÜH placed an extraordinary order in July 1936 for 190 German aircraft. The order comprised sixty-six Ju-86 bombers and three Ju-52 transports, thirty-six He-46 fighters and eighteen He-70 long-range reconnaissance aeroplanes, thirty-seven Bücker Bü-131 trainers, eighteen Focke-Wulf

---

<sup>122</sup> Quoted in Gy. Juhász, *Hungarian Foreign Policy*, p. 124.

<sup>123</sup> Macartney, *October Fifteenth*, I, p. 175.

FW-56 and six FW-58B advanced trainers, and six Bayerische Flugzeugwerke Bf-108s.<sup>124</sup> The Ju-86s, He-46s and He-70s were to be powered by Manfréd Weiss-produced K-14 engines (the Ju-86s were ordered in spite of an earlier general staff report that found them too heavy for light bombers, and too weakly armed).<sup>125</sup> This order, with the fifty-two CR-32s being delivered from Italy, composed a nearly complete small air force, and would have, if immediately filled, ended the fiction of Hungarian aerial disarmament—the Ju-86 order plainly listed bomb racks and bombsights.<sup>126</sup> It also was more aeroplanes than Hungary could handle at the moment. A complete accounting in 1935 of all qualified pilots in the LÜH, without regard to recency of experience, listed 223 names, including thirteen officers of the general staff, with an additional thirty-eight in various stages of training.<sup>127</sup> Delivery of the primary trainers was to begin immediately, with the entire order to be completed by the end of September 1937. In fact, by the end of 1937, although six fighter squadrons had been formed and equipped with CR-32s, no significant numbers of German combat aircraft had arrived.

But they would. The 1936 order marked the Honvéd's turn to Germany, a move long desired by Gömbös and much of the VKF. German weapons were more sophisticated, and German martial instincts more sure. Hungary would still seek and appreciate Italian military support in a range of areas, but that the resurgent Germany would very soon eclipse Italy as Hungary's primary patron was clear. This of course was welcomed by the officers and men who coveted the newest German aircraft and tanks, but some Hungarian political leaders, including the Regent, were wary of growing German power and sought ways to balance it in

---

<sup>124</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

<sup>125</sup> K-14: Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 179; Ju-86: Veszényi, 'A magyar katonai repülés', p. IV/107.

<sup>126</sup> Bomb racks/sights: Veszényi, 'A magyar katonai repülés', p. IV, 106.

<sup>127</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

order to ensure Hungary's independence. In the next three years Hungary would continue to exploit German aid for its own rearmament and revisionist plans while trying to subtly undermine German designs for domination of central and eastern Europe.

For a decade after the end of the Allied Control Commission mandate, the Trianon military clauses remained in effect. Hungarian airmen continued the campaign of deception they had initiated in 1920, using civilian aviation to conceal a growing but still clandestine air force. They were exposed to different theories of air power, and developed their own expansive view, informed by but not conforming to Douhetism. But their efforts to build an air force in accordance with their ideas were continually frustrated by treaty, economic crisis, the limit of domestic industry, and lack of foreign suppliers. By 1936, the economic crisis had eased, a few Hungarian aviation factories had proven their ability to build quality (if unoriginal) products, and shrewd diplomacy had secured Italian and German backing. In 1938 the hated Treaty of Trianon would finally begin to crumble, and Hungarian military airmen would be free to operate openly for the first time since 1920.

## Chapter 6

## Independence: 1938-40

Hungarian national life began to speed up in 1938. This year would see the effective end of Trianon, the disintegration of the Little Entente, the recognition of armament rights, and the reoccupation of lands lost to Czechoslovakia. The next two years would bring more prosperity, pride and population, as a second German mediation resulted in significant territorial gains from Romania. For the Hungarian armed forces, the period was one of growth in both quantity and quality. The air service was officially acknowledged and granted bureaucratic independence from the army, the holy grail of airmen everywhere. There was war in 1939—for Hungary a short border fight with Slovakia—but Budapest managed to remain a non-combatant in the fight that began between Germany and Poland. Even as the government basked in its triumphs, however, there were serious concerns that the alliance with Germany, the mechanism that had produced such wonders in two years, was fatally flawed.

The breakthroughs of 1938 seemed unlikely in early 1937. Although the Defence Ministry had set its cap at Germany, the government's general drift toward Berlin had been checked by Gömbös's death and Horthy's appointment of Kálmán Darányi to be Prime Minister. Darányi was one of Bethlen's men who had been brought into the cabinet to moderate Gömbös's worst impulses. He was known as a traditional Hungarian conservative, 'quite untinged by any radicalism, or even active anti-Semitism', and so his accession to the premiership was seen both inside and outside Hungary as a turn away from Germany.<sup>1</sup> This turn was motivated by the sense that Germany was beginning to dominate Italy in the Axis,

---

<sup>1</sup> Macartney, *October Fifteenth*, I, pp. 105-6.

and that Gömbös's internal policies threatened dictatorship. Darányi set about strengthening the Italian relationship as well as increasing the power of the Regent and the Upper House. He also made public overtures to Britain and France. Germany responded with indirect warnings about excessive revisionism. There was a 'perceptible freeze in German-Hungarian relations after Gömbös's death.'<sup>2</sup> The Little Entente felt the chill and sought to exploit it. They approached Foreign Minister Kálmán Kánya, an extremely experienced, if high-handed, career diplomat, with proposals to tie rearmament to non-aggression. Kánya declined to sign any agreements, but he played the Little Entente along while trying to entice Germany to greater levels of support for Hungarian claims at the expense of Yugoslavia and Romania. László Bárdossy, Hungary's minister in Bucharest, was invited to the August 1937 Little Entente conference in Sinaia, Romania, where he repeated Kánya's refusal to negotiate with the Little Entente as a whole. Bárdossy instead proposed that each state 'voluntarily' recognise Hungary's right to rearm, and then improve the status of their Hungarian minorities, after which Hungary would announce a policy of non-aggression. It was important to Hungary that the Little Entente's concessions come first and that its declaration of non-aggression be seen as a result, and not a condition, of its neighbours' goodwill. The Little Entente ignored the Hungarian proposal for a year, taking it up seriously only the following summer.<sup>3</sup> In the second half of 1937, relations between Berlin and Budapest began to warm again. Kánya gained little from his feelers toward the West, which seemed determined to appease Hitler's direct demands. Small states survive through their ability to read the changes in the international balance of power, and the sense in Hungary was that German ascendancy would continue. The West was not interested at the

---

<sup>2</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 128.

<sup>3</sup> *Ibid.*, pp. 130-1.

moment in a subtle attempt to wean German clients from their patron. And although the Little Entente was trying to do exactly that through its diplomatic initiatives, Hungary realised that more was to be gained in consolidating ties with Germany than in trying to forge new bonds with former enemies. British openness to revision in central Europe served only to strengthen Hitler's hand in the region, since it was clear that his pen would draft any new borders.

Meanwhile, growing German power was making the *Anschluss* appear inevitable. Mussolini's earlier fervent opposition had softened considerably. There had been fears of a war with Germany after the abortive Nazi putsch in Vienna in 1934, but by January 1936, Mussolini could tell Hitler's ambassador that he would not object if Austria became a German satellite. He voiced similarly agreeable sentiments to Hungary's military attaché, Colonel László Szabó. By May 1937, Mussolini considered Austria 'a German state' and in November he suggested that things should 'take their natural course'.<sup>4</sup> German Foreign Minister Joachim von Ribbentrop used similar language with Döme Sztójay, Hungary's minister to Berlin, on 4 March 1938. It was the West that was opposed to a 'normal development of the situation', Ribbentrop said, while Germany 'was hoping for a peaceful solution'.<sup>5</sup> By this time Hungary was resigned to German absorption of Austria, and its leaders were unwilling to risk Berlin's ire by intervening directly to try to save a doomed Vienna. This was also the Italian stance. Baron Villani, Hungary's minister in Rome, reported that Italian Foreign Minister Count Galeazzo Ciano had confided to him on 2 March, 'The *Anschluss* or complete *Gleichschaltung* is unavoidable, and sooner or later must happen. Italy cannot renounce its friendship with Germany; it would, however, provide

---

<sup>4</sup> Quoted in Gooch, *Mussolini and his Generals*, pp. 320-1.

<sup>5</sup> *Documents of German Foreign Policy, 1918-1945* Series D, Vol. 2, No. 65.

her some security and permanence if Italy and the states close to her formed a horizontal axis, which would run from Rome through Belgrade and Budapest and lead to Warsaw.’ Ciano also predicted that ‘Czechoslovakia as an independent country would soon disappear from the map of Europe’, and that the resulting common border between Hungary and Poland would aid their cooperation.<sup>6</sup> Kánya took up the idea of the ‘horizontal axis’ that same day with Polish Foreign Minister Joseph Beck, writing, ‘Italy already takes into account the danger of a shift in the balance of power in Central Europe’. Hungary, according to Kánya, ‘should prefer the maintenance of Austria’s independence rather than the neighbourhood of an eighty-million strong Germany. Being familiar with the related very resolute intentions of the German National Socialist Government, however, we have to be prepared for the event that the union of the two German states will sooner or later be consummated.’<sup>7</sup>

Consummation came on 12 March 1938. Austrian troops, in accordance with the last order given by Chancellor Kurt von Schuschnigg, offered no resistance to the German soldiers pouring across the border. Schuschnigg had resigned under intense pressure from Hitler and Göring, who were infuriated by his having called for a plebiscite to be held on 13 March. Hitler convened key generals, who pulled from the shelf an old operation plan intended to respond to an attempted Habsburg restoration. He ordered Case Otto to be put into effect before the plebiscite could be conducted. The Wehrmacht began massing on the frontier on the morning of 11 March. Austrian President Wilhelm Miklas initially refused Hitler’s demand that Schuschnigg step down in favour of the quisling Arthur Seyss-Inquart.<sup>8</sup>

---

<sup>6</sup> *Diplomáciai iratok Magyarország külpolitikájához, 1936-1945*, Vol. II, L. Zsigmond and M. Ádám, (eds.), (Budapest, 1965), No. 120.

<sup>7</sup> Quoted in Gy. Juhász, *Hungarian Foreign Policy*, p. 133.

<sup>8</sup> Vidkun Quisling had not yet committed his perfidy in Norway at this time, but the term seems apt.

But when Austrian Nazi mobs took to the streets at Berlin's command in the evening, Schuschnigg announced his resignation and the policy of non-resistance over the airwaves. Seyss-Inquart's first duty as chancellor was to request German intervention to restore peace, which gave Hitler a most transparent fig leaf to cover the invasion. Mussolini, to whom Schuschnigg had appealed earlier in the day, declined to help, saying Austria was 'immaterial' to him. Hitler was ecstatic over Italian passivity, promising that he would always remember Mussolini's help. 'If he should ever need any help or be in any danger,' Hitler told Prince Philip of Hesse, the Führer's personal representative then in Rome, 'he can be convinced that I shall stick to him whatever may happen, even if the whole world gangs up on him.'<sup>9</sup>

The fact of the *Anschluss* was no great surprise to Hungarian leaders, although the timing caught some off-guard. It did cause a minor uproar among the Hungarian population who heard on radio broadcasts the news that German troops were at the frontier.<sup>10</sup> Many people feared that the Germans would continue east, and some on the extreme right hoped that would be the case. Admiral Horthy attempted to calm the nation via a radio address on 3 April, putting the best possible face on the German occupation of Austria, and assuring the country that very little had changed. 'It is hard for a sober-minded person to understand exactly what the reason for the unrest and excitement is, for in fact, there is no basis for it whatever,' he said. Only the uninformed were agitated:

For anybody with an open mind and seeing eyes who judges the situation must know that the union of Austria and Germany means only one thing for our country: that an old friend of ours who has been dragged by the peace treaties into an impossible situation has united with another old friend and faithful comrade-in-arms of ours, i.e with that

---

<sup>9</sup> Quoted in W.L. Shirer, *The Rise and Fall of the Third Reich: A History of Nazi Germany* (New York, 1960), p. 343. Entire paragraph based on Shirer's account, pp. 337-44. Hitler fulfilled his promise to Mussolini on 12 Sep 43, when German paratroops rescued the Duce from imprisonment.

<sup>10</sup> D. Cornelius, *Hungary in World War II: Caught in the Cauldron* (New York, 2011), p. 64.

Germany which in the testimony of history always was a trustworthy ally of her friends, and has kept her pledges for life and death. This is the whole thing. Nothing else happened from our point of view.<sup>11</sup>

Even as he portrayed the *Anschluss* in anodyne terms, Horthy included a veiled warning to right-wing radicals who sought to take advantage of the situation. ‘Those who prefer fishing in troubled waters,’ he said, ‘have availed themselves of the opportunity to bring about discord to suit their own purposes. Yet this attempt is futile. For by spreading rumours, excitement lasting a few moments may be brought about, yet I can assure everybody that in this country nobody will disturb order and tranquillity unpunished.’

Horthy then issued another warning, less veiled, to restive army officers.

Although this significance of the Army is recognised by everybody today, they also should know that an army engaged in politics is not only worthless but harmful too. To the nation as a whole, and to each citizen. Nevertheless, of late there were some who believed that this body of officers could be got near to, and this free-of-politics unity broken up.

I feel quite certain that the attempt of these persons will come to nought. Still I warn those who, although shrouded in the mantle of ideals, nevertheless, to ensure their self-assertion, are experimenting: hands off the body of officers! The commissioned officers know that the Army is above parties and is the nation’s own.<sup>12</sup>

Near the end of the speech he returned to the theme of appropriate spheres of influence. ‘In this country an end must be put to everybody claiming the right of directing foreign policy and of daring to disturb the internal peace in whatever manner.’ Horthy’s words were intended to quell the excessive partisanship growing among the officer corps led by General Jenő Rátz, the chief of staff. Gömbös had groomed Rátz, who was a friend of Arrow Cross leader Ferenc Szálasi, although his appointment as chief of staff had come on Darányi’s watch.<sup>13</sup> Rátz had recently circulated a memorandum in which he advocated an intensification of the furtive rearmament effort. The government naturally wanted to expand

---

<sup>11</sup> *Confidential Papers of Admiral Horthy*, pp. 96-100.

<sup>12</sup> *Ibid.*

<sup>13</sup> Macartney, *October Fifteenth*, I, pp. 167, 174.

and modernise the army, but Rátz strayed beyond his area of responsibility in suggesting the country needed ‘political and moral rearmament’, along with land reform, income redistribution, and anti-Semitic laws.<sup>14</sup> Kánya opposed Rátz, as did the more financially cautious in the government party. Horthy was approached with these ideas by retired General Károly Soós, himself a former Chief of Staff and Defence Minister. Horthy rejected Soós’s recommendation that he abandon constitutional methods and take the country in a more autocratic direction.

The Rátz-Soós memorandum made its way to Béla Imrédy, a skilled financier and president of the National Bank. Imrédy embraced the plan, although he had previously shown no illiberal inclinations, and took it with Rátz to the Prime Minister. Darányi approved the scheme, without the dictatorship, and agreed to put forward anti-Jewish measures and to embark on an ambitious rearmament programme.<sup>15</sup> Such a build-up could only be considered after the end of League of Nations financial oversight on 28 January 1938.<sup>16</sup> Imrédy drafted the two bills secretly, and on 5 March, Darányi floated the ideas in a speech at Győr. The speech went over well in Hungary, and elicited no response from the Little Entente, so Darányi carried on, appointing Imrédy to the cabinet on 9 March as Minister of Economic Cooperation.<sup>17</sup> In April, the Lower House approved the bill that included a five-year expenditure of one billion pengős on defence—60 per cent on direct military purchases, the remainder on infrastructure improvements related to defence. The upper house passed it without change in May, and the following month the ‘Győr

---

<sup>14</sup> T. Sakmyster, ‘Army Officers and Foreign Policy in Interwar Hungary, 1918-41’, *Journal of Contemporary History*, Vol. 10, No. 1 (Jan 1975), p. 26.

<sup>15</sup> Macartney, *October Fifteenth*, I, p. 214.

<sup>16</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 132.

<sup>17</sup> Macartney, *October Fifteenth*, I, pp. 212-16.

programme' became Law XX of 1938.<sup>18</sup> Six hundred million pengős would be raised through a one-time tax on property exceeding 50,000 pengős in value, and the rest would come from an internal loan underwritten by large companies and banks.<sup>19</sup>

Law XX authorised the billion pengős in defence spending, but it did not dictate the Honvéd's organisation. That was the responsibility of Defence Minister Vilmos Róder, who presented a proposal to the Crown Council one month before Darányi's speech in Győr. Róder's 'Huba plan' was based on the 1932 scheme that had gone unrealised, and aimed to maximise Hungary's ability to mobilise its forces at short notice.<sup>20</sup> The army's peacetime strength under Huba would be 107,000 men, growing to 250,000 after mobilisation of reserves. It was organised into three armies of seven corps. The corps were composed of twenty-one infantry divisions, two motorised and two cavalry brigades, one air division, plus border guards, artillery, and support forces. According to its designers, only an armed force that could be concentrated quickly would be effective against the 'overrunning strategies' (*lerohanás hadászatok*) of Hungary's neighbours. This dictated that the four motorised and cavalry brigades should receive the highest priority. After the passage of Law XX, the Defence Ministry decided to proceed with Huba in three tranches. Huba-I would consist of the mobile brigades, the core of the infantry divisions (twenty-one two-regiment brigades), some artillery, and a significant increase in the flying corps. Huba-II would add armour and more aircraft, and Huba-III would fill out the infantry divisions' missing brigades. By the

---

<sup>18</sup> L. Dombrády and S. Tóth, *A Magyar Királyi Honvédség, 1919-1945* (Budapest, 1987), p. 112.

<sup>19</sup> Gy. Ránki and J. Tomaszewski, 'The Role of the State in Industry, Banking and Trade', in M.C. Kaser and E.A. Radice (eds.) *The Economic History of Eastern Europe 1919-1975*, Vol. II: (Oxford, 1986), pp. 41-2.

<sup>20</sup> Huba was the name of one of legendary seven Magyar chieftains. Earlier plans had been named after Árpád and Előd.

end of March the Defence Ministry had worked out the details of the plan, and Röder instructed the VKF to order the necessary prototypes and acquire production licences.<sup>21</sup>

At the beginning of 1938, the LÜH was organised into the 1st Aviation Brigade, composed of three air regiments, along with an independent long-range reconnaissance group operating from Mátyásföld. There were twenty-three under strength squadrons in all. The 1st Flying Regiment was made up of two fighter groups of three squadrons each, based at Börgönd, Veszprém, and Kecskemét.<sup>22</sup> The 2nd Flying Regiment was composed of two bomber squadrons at Szombathely, and the 3rd Flying Regiment consisted of three light bomber squadrons at Tapolca, Veszprém and Pápa. The short-range reconnaissance squadrons were aligned with and subordinate to the seven mixed brigades, and were based at Budapest, Székesfehérvár, Kaposvár, Pécs, Szeged, Debrecen and Miskolc.<sup>23</sup> Until autumn 1938, these designations were for internal reference only; in public the units were still known by their cover names (e.g. 2/I Bomber Group was the ‘Airmail Company’).

Fifty-five million of the Győr programme’s 600 million pengős were designated for aviation equipment and stores. The first domestic beneficiary was Manfréd Weiss, which received in July an order for thirty-six WM-21 short-range reconnaissance aircraft. The Defence Ministry insisted on decentralising aeroplane production (a tactic advocated by Szentnémedy in 1935), and so ordered an additional twelve WM-21s each from MÁVAG (*Magyar Állami Vas-, Acél- és Gépgyárak*) and Magyar Waggon- és Gépgyár (MWG).<sup>24</sup> The WM-21 ‘Sólyom’ (Falcon) was an adaptation and improvement of the Fokker C-VD. A

---

<sup>21</sup> Ibid. pp. 111-2.

<sup>22</sup> From this point onward, the air service adopted a confusing two-part designation scheme. When discussing a group in relation to its regiment, the designation is given as regiment (Arabic)/ group (Roman). Squadrons followed a group/sqn format, but both numbers were Arabic. Thus the 1st Fighter Group of the 1st Flying Regiment would be 1/I, and its second squadron 1/2.

<sup>23</sup> Holló, *A Galambtól a Griffmadárig*, p. 60.

<sup>24</sup> Szabó, *MKHL, 1938-1945*, p. 31.

two-seat, open-cockpit biplane, powered by the WM-14 870-hp engine, the Sólyom was faster and more robust than its German stable mate, Heinkel's He-46, but it was not blessed with easy handling characteristics, and the lower wing restricted the observer's vision.<sup>25</sup> Nevertheless, WM, MÁVAG and MWG built 128 Sólyoms and they performed satisfactorily until 1941. The WM-21's best attribute was its native origin. Being constructed entirely within Hungary meant no hard currency left the country, and it stimulated MÁVAG and MWG aircraft production at a critical time for the industry.

Despite the air corps' growing preference for German aeroplanes, the LÜH could not count on Berlin to fill the additional aviation requirements of the Huba plan owing to excessive delays in deliveries. From the 1936 order of 190 aircraft, only the eighteen He-70s had arrived by the end of 1938. In the summer of 1938, the LÜH placed a contract for thirty-six He-112s, a design that had set a world speed record and had narrowly lost the German fighter competition to the Bf-109. A single aeroplane was delivered in February 1939, followed by two additional prototypes, before the German Aviation Ministry (*Reichsluftfahrtministerium*, RLM) cancelled the contract.<sup>26</sup> The RLM always prioritised production for domestic needs, and in 1936 Göring had introduced a Four-Year Plan that aimed for self-reliance in the aviation industry. The Four-Year Plan forced manufacturers to fill orders for the Luftwaffe first and to curtail the variety of models produced. This meant that Hungary would take a back seat to the Luftwaffe in delivery of aeroplane types, like the He-46, that were in use by both services, and that manufacture of models not adopted for

---

<sup>25</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 183; vision restriction: Szabó, *MKHL, 1938-1945*, p. 68.

<sup>26</sup> Szabó, *MKHL, 1938-1945*, p. 59.

series production for the German force, such as the He-112, would be discontinued.<sup>27</sup>

Hungary was the single largest customer for German combat aircraft in the period 1936-38, accounting for over a quarter of all sales in 1937, but the export market represented less than 5 per cent of the 1.3-billion-RM industry. The rest of the 7,500 aircraft produced in Germany from 1934 to 1939 were dedicated to the Luftwaffe.<sup>28</sup>

Hungarian airmen therefore had to look again to Italy for assistance. Italy had extended another substantial arms credit in 1937, this time of 120 million liras, of which 18 million went for purchases of aviation equipment. The LÜH used this grant to finish paying for the 1936 order of fifty-two CR-32 fighters, all of which had arrived by the end of 1938.<sup>29</sup> The VKF did not support further purchase of the CR-32, because of its approaching obsolescence, but the LÜH persisted.<sup>30</sup> Due to the ready availability of the Fiat, it formed the backbone of the Hungarian fighter force for two years. The CR-32 would have looked at home on a First World War aerodrome, with its open cockpit, fixed landing gear and fabric wings, although its service ceiling of 25,000 feet and maximum speed of 210 knots exceeded the performance of 1918 aeroplanes. The He-112, the other fighter the LÜH ordered in 1938, belonged to the future. It was an all-metal, low-wing monoplane with retractable gear and an enclosed cockpit, could reach 31,000 feet and 275 knots, and was armed with two 20-millimetre cannon in addition to its pair of machine guns. But Heinkel could not deliver the He-112, and Fiat could supply CR-32s, and so Hungarian fighter pilots flew the ageing Italian design.

---

<sup>27</sup> He-112 export orders in the queue ahead of Hungary's did get filled: Spain received 19, Japan 12, and Romania eventually took over 24 former Luftwaffe machines.

<sup>28</sup> Homze, *Arming the Luftwaffe*, pp. 148-54, 205-6, 159.

<sup>29</sup> Sisa, 'MKHL olaszországi beszerzései', p. 1059.

<sup>30</sup> Winkler, 'Magyar repülés története', HL Tgy 3.327.

Much the same scenario played out in the acquisition of a suitable light bomber. The LÜH saw the need for a multi-role aeroplane capable of reconnaissance, daytime bombing, and low-level attack. The Ju-86 was known to be ‘clumsy’ and ill suited to low-level operations, and the German RLM did not offer any other models for export.<sup>31</sup> Caproni did make available its new Ca-310, which promised to fulfil the LÜH performance criteria as well as the production requirements—it would accept the WM-14 engine and could be manufactured under licence in Hungary. The LÜH therefore ordered thirty-six Ca-310s in late June 1938, with delivery in three batches to be completed by October. The final aircraft did not arrive until June 1939, but given the lengthy delays to which the LÜH had grown accustomed, the Ca-310’s tardiness was not a major drawback. Its poor performance was, however, and resulted in the air service returning the entire lot to Italy for replacement by a different model. Although the trial machines had been equipped with a 700-hp, 14-cylinder engine, the production aeroplanes Caproni sent to Hungary came with weaker 7-cylinder engines of only 460 horsepower. The engines tended to overheat at low altitude, and their lower power significantly degraded the aeroplane’s capability. In autumn 1939, the LÜH sent Caproni a list of fifteen flaws to be rectified to keep the type in service. Yugoslavia had reported similar problems with its Ca-311s, and the Italian air ministry’s inspector validated the Hungarian complaints. With no reasonable prospects of correcting the design’s shortcomings, Caproni instead offered to exchange the remaining Ca-310s for a slightly newer and more powerful twin-engined bomber, the Ca-135. The Ca-135 also suffered from a number of deficiencies. Even with the WM-14 engines, it was too slow. Its defensive armament was light in comparison with other similar designs (Bristol’s Blenheim IV, for example, which was exported to Romania and Yugoslavia, sported six machine guns to its

---

<sup>31</sup> Clumsy: Szabó, *MKHL, 1938-1945*, p. 55.

three), the hydraulic system was prone to failure, and the propeller had a disturbing tendency to fall off. Nevertheless, its payload and bombing accuracy were deemed acceptable, and the Ca-135 served with the Hungarian air service until late 1942.<sup>32</sup>

Légügyi Hivatal officers did not know in 1938 that the Ca-310 order would be such a disaster, but they were aware of the technological challenges facing their service, even with access to German and Italian exports. In the January 1938 *MKSz* round-up of the previous year's aviation developments, Szentnémedy printed a comparative chart that showed one Czechoslovak and four French machines with performance exceeding that of the ordered, but never fielded, He-112, along with a pair of French four-engine heavy bombers far surpassing any planned Hungarian capability.<sup>33</sup> Through the course of the year, matériel defects and production delays made the situation more bleak. The LÜH staff recommended comprehensive trials be conducted before any orders were placed, but this was ignored, with predictable results. In October, the situation was brought to the attention of Admiral Horthy, through a report by Lieutenant Colonel László Hány, the long-serving fighter pilot appointed in May to head the LÜH. Hány's assessment of the technical state of the air service began with a critique of the procurement process before taking up the problems of particular aircraft. Horthy's extensive hand-written notes on Hány's report reveal the Regent's interest in aviation and establish his working knowledge of the air service's challenges, and therefore merit lengthy citation:

Today countless ministry sections share the portfolio for aviation material. Responsibility for motorised and armed aeroplanes, cannon, and technical parts is established and organised far from the flying. Thus the fliers, without experts and inquiry and in the absence of basic battle-trials, in the recent past spent 27 million marks on aviation equipment which is not suitable for combat.

<sup>32</sup> Sisa, 'MKHL olaszországi beszerzései', pp. 1068-1074. Bristol armament: Szabó, *MKHL, 1938-1945*, p. 73.

<sup>33</sup> F. Szentnémedy, 'Visszapillantás a légügy múlt évi fejlődésére', *MKSz*, 1/1938, p. 118.

The procured bombers (Junkers Ju-86) are not suited to low altitude attack.

Our long-range reconnaissance machines are bad because the observers cannot see anything out of them.

The short-range reconnaissance machines have to be improved at home. (The ailerons break away.)

The heavy bombers are not suitable, because they can carry only a 1000 kg bomb load 400-450 km distance. We have to carry out a reconstruction on them. Who is responsible for the errors? The technical service is not composed of experts. The losses spoil the corps' spirit and corrupts confidence in leadership.

This year's order of Italian aircraft also occurred with no connection to battle-trials or expert opinion. For low-level attack we have to use such aeroplanes which are neither manoeuvrable nor fast, and are equipped with high-altitude engines. If every tool does not advance the corps' work, then we cannot expect results.<sup>34</sup>

Háry addressed the inability of the air service to take in sufficient numbers of new officers and fresh recruits, and identified one of Hungary's fundamental barriers to becoming a regional air power—its agrarian nature and the attendant obstacles to training suitable young men as mechanics and engineers. He then described the difficulty in conducting combat flight training on a peacetime calendar. Admiral Horthy offered no disagreement with Háry's analysis, and paid particular attention to the recruiting deficits.

It is a mistake that the replacement of active officers (so far) has not been addressed by the flying corps. During academy training it is not possible to recognise the prospective flying corps' officer. If he comes to the flying corps, he is forced into the thankless role of a student for one to two years of training.

In 1935, twenty-one lieutenants were commissioned into the flying corps, and although since 1935 seventeen, and since 1936, twenty-five flying squadrons have been formed, in 1937, thirteen, and in 1938, eight officers have come to the flying corps from Ludovika, when in this year our casualties are already twice that. Thus the present situation, in which there is a shortfall of 60 men from the established officer strength, that is, 1/6 of the officer corps. The officer shortage is temporarily filled with reserve officers, who bring with them to the staff the seed of discontent and agitation, and regard the air service as just a last employment refuge. We fill the gap (as always), but the idea of the unified officer corps suffers (such are the replacements). It is hard to make up for the absence of the nursery [*gyermekszoba*—i.e., cadet training].

The qualification of replacement enlisted men is principally completed—on paper. The new recruit intake is not sufficient to provide our agrarian country with industrial training. It is not possible to train a farm hand to be an aeroplane mechanic, etc, in 2 years. The squadron technical service rests on the shoulders of 5-8 chief engineers, together with expensive machinery and security staff. Flying training is weak because

<sup>34</sup> Magyar Országos Levéltár (MOL) K. 589/8930-12. Underlines in original.

there is not enough time. Fifty-two Sundays and Saturdays, twenty holidays, Christmas, Easter, harvest holidays, bad weather, guard duty, etc.<sup>35</sup>

Horthy's note about the year's casualties exceeding officer accession was not an exaggeration. From October 1937 until mid-July 1938, the LÜH had suffered sixty-four aircraft accidents at a cost of twenty airmen's lives. The accident rate had so alarmed the high command that it had commissioned an investigative panel, led by Lieutenant General Elemér Novák-Gorondy. The report was damning. It found the entire structure—organisation, equipment, training, material support—unsuitable.<sup>36</sup> Regarding the rash of accidents, the panel observed the increased sophistication of the new aircraft in the inventory and doubted that the pilots had sufficient experience in the recent types.<sup>37</sup> To increase overall effectiveness and efficiency, it recommended the aviation authority be placed directly under the defence minister and have its own budget. The panel also criticised the speed at which the LÜH had attempted to expand, arguing that slower and more methodical growth would lead to better capability. 'The Hungarian air force is a young service with immature organisations and equipment,' wrote Novák-Gorondy, 'which from the beginning has struggled with thousands of difficulties.'<sup>38</sup> There is no evidence that Admiral Horthy saw the Novák-Gorondy report himself (Háry made no reference to it in his presentation), but some of its elements were incorporated into Háry's presentation.

A fix for the pilot training shortfall was already underway when Horthy received Háry's report. The Defence Ministry had accepted in June an Italian offer to provide training for 200 Hungarian pilots. The contract was for two years at a total cost of 18 million liras (roughly equivalent to one squadron of Italian aeroplanes), and would take place at

---

<sup>35</sup> Ibid.

<sup>36</sup> Szabó, *MKHL, 1938-1945*, pp. 82-3.

<sup>37</sup> Veszteányi, 'A magyar katonai repülés', p. IV/66.

<sup>38</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 83.

Grottaglie airfield near Taranto. The South Italian Flying Course (*Dél-olasz Repülő Tanfolyam*, DRT) followed the earlier, small-scale pilot training scheme in which the Batáry brothers took part. It was conceived before the recognition of arms equality, and was expected to be conducted with some discretion, if not complete secrecy. That accounts for the choice of Grottaglie, an isolated outpost and the site of a short-lived secret training programme for German pilots in 1933, instead of the established Italian training facilities at Perugia.<sup>39</sup> After the acknowledgement of Hungarian armament rights, the newly hatched training programme was able to proceed without the legal complexities required a decade earlier. Instruction began for the first class on 19 October 1938. The eight-month course was conducted under the Italian curriculum, with each student pilot receiving eighty hours of flight time, of which sixty were in a primary trainer and the rest in an operational type. Captain Pál Batáry returned to Italy to command the bomber training squadron; Captain Jenő Forró led the fighter unit.<sup>40</sup> Hungarian officers handled the classroom instruction, while Italians conducted the in-flight training on Breda Br-25s and Romeo Ro-1s. After their initial solo flights, pilot candidates were sorted into fighter, bomber and reconnaissance tracks.<sup>41</sup> The DRT was a complete success for Hungary. The programme provided instruction for two hundred pilots above Hungary's own training capacity, and at virtually no cost, since even the 18 million-lira expense came out of an Italian credit line.

Two domestic training programmes were established the following year, both of them bearing the Regent's name. The first, the Miklós Horthy National Flying Foundation, was an umbrella organisation that helped underwrite the university and sport clubs through a public

---

<sup>39</sup> B. Juhász, 'Olasz-Magyar vezénylések', 163; German programme: C.D. Eby, *Hungary at War: Civilians and Soldiers in World War II* (University Park, Pa., 1998), p. 153.

<sup>40</sup> Veszteányi, 'A magyar katonai repülés', p. IV/150.

<sup>41</sup> Eby, *Hungary at War*, p. 154.

funding scheme. The proceeds of certain cinema tickets and stamps financed civilian gliding and flying training, and promoted aviation through the Foundation's magazine *Magyar Szárnyak*.<sup>42</sup> Horthy was enthusiastic about the Foundation, because he saw it as a path to 'create numerous trained and current young pilots suitable as reservists.'<sup>43</sup> The second institution was an aviation academy established on the grounds of a former Habsburg cadet school in the Felvidék town of Kassa. The Regent presided over the school's first matriculation on 9 November 1939, and it was known thereafter as the Royal Hungarian Miklós Horthy Military Aviation Academy. Its first class consisted of fifteen cadets, but the number had increased tenfold by 1944. By that time the course had been shortened to meet the wartime demands for air force officers, and no longer granted a diploma equivalent to a civilian college.<sup>44</sup>

The DRT and the indigenous flight schools increased the number of new Hungarian pilots, but they did not address concerns about competence raised by Novák-Gorondy. Lieutenant Colonel Hány recommended the reduction of LÜH pilots' participation with the national airline. Hány acknowledged the role of MALERT in sustaining Hungarian aviation during the period of Allied inspections, but he suggested it no longer performed that critical role, and in fact was a drain on manpower that the country could not afford. 'The military vestiges in the air traffic company,' Horthy recorded, 'which until now have offered a good disguise for the possibility of flying, cannot go any further... It is not possible that when we have a 60-officer shortage, we should attach to the airline (three or four machines) ten active officers with the highest flying training, not in their officers' uniforms but in the airline's

---

<sup>42</sup> E. Kistelegdi, 'A repülő akadémia története', in T. Rada (ed.), *A Magyar Királyi Honvéd Ludovika Akadémia és a testvérintézetek összefoglalt története, II. kötet* (Budapest, 2001), p. 177.

<sup>43</sup> MOL K. 589/8930-12.

<sup>44</sup> T. Rada, *A Magyar Királyi Honvéd Ludovika Akadémia*, pp. 345-54.

livery.’ Both Horthy and Háy looked forward to the time ‘after the recognition of our military emancipation, when further covering is not necessary,’ and the air service would be freed from the budgetary and administrative concerns of civilian aviation.<sup>45</sup>

After enumerating the air service’s problems, Háy reached the paper’s conclusion. ‘This report shows’, he wrote, ‘that the current situation of aviation is not healthy, and is in need of remedy. For twenty years land forces leaders have experimented with aviation... The outcome of that well-intentioned experimentation is today’s sad personnel, material and training situation.’ Háy then declared that on 1 November he would ‘throw out 160 aeroplanes as worthless rubbish, because for six to ten years they have been mortal dangers.’ Finally came the proposal, which by this point would have been no surprise: ‘Under the name Royal Hungarian Aviation Bureau or some other name, an organisation should be established that brings independent responsibility for Hungarian aviation under a single individual.’<sup>46</sup>

The Regent took Háy’s report to heart. ‘Without the knowledge of the theory and application of flight to a minute level of detail,’ he wrote, ‘it is not possible to lead, and because of this, in my opinion, we must have aviation experts.’ Horthy’s last page of notes included an organisational sketch that showed a single agency in command of all aspects of military aviation, subordinated to the Chief of the General Staff (VKF), the Defence Ministry, and the Army High Command (HFP) for planning, programming and operational purposes. Under the diagram and above his signature, Horthy described the air service as

---

<sup>45</sup> MOL K. 589/8930-12.

<sup>46</sup> Ibid.

being ‘cut out of the Honvédség...it should work autonomously to achieve the organisational and operational goal. To reach independence. (*Önállósítani*).’<sup>47</sup>

The degree of independence that the air service ought to enjoy had been debated throughout 1938. Everyone involved recognised that the growing and barely disguised flying corps needed a more efficient structure, but Hungarians were not immune from the normal administrative affliction that makes bureaucrats eager to accumulate authority and reluctant to relinquish it. Therefore the various proposals from the Defence Ministry and VKF featured new titles and updated reporting requirements, but did little to improve the air service’s effectiveness. Since the beginning of the year, responsibility for aviation activities had been shared among three offices within the Ministry: a chief of the aviation group (*légügyi csoportfőnök*), an aviation inspectorate (*légügyi szemlélő*), and an air force headquarters (*légierő parancsnokság*, Lepság). In addition to these was the Chief of the Air Staff post on the VKF. After some shuffling of personnel within the ministries, by May 1938 General Waldemár Kenese had been confirmed as the head of the inspectorate, and Colonel Ferenc Feketehalmy-Czeydner appointed chief air officer of the VKF. Ferenc Szentnémedy was promoted to colonel and made chief of the aviation group, while Lieutenant Colonel Hány was given operational control at Lepság. The installation of competent individuals did not resolve the organisational muddle, and after internal attempts failed, the Defence Ministry invited an Italian expert to study the situation. Regia Aeronautica Lieutenant Colonel Gallo arrived in Budapest in August 1938 and submitted his proposal on 1 September. He recommended an independent air force composed of six regiments amounting to 309 aircraft, reporting directly to the Defence Ministry. Given Gallo’s status as an officer of an independent air force himself (Mussolini had given the RA equal status with

---

<sup>47</sup> Ibid.

the army and navy in 1923) and a representative of the primary supplier of aircraft to Hungary, it would have been surprising indeed for him to have returned a proposal in favour of a small air service that functioned as a branch of the Honvédség. The VKF opposed the Gallo plan on the grounds that it would be too difficult and expensive to create the new organisations and acquire additional aeroplanes.<sup>48</sup>

General Henrik Werth, previously the commandant of the Hadiakadémia, was by this time the head of the VKF. A change of government in the spring had caused ripples through the defence establishment. Prime Minister Darányi's opponents had succeeded in forcing him out of office because of his secret collaboration with Szálasi's Arrow Cross in connection with the anti-Jewish law. Law XV of 1938, as it became known upon passage, restricted the number of Jews in the professions, and had been introduced as part of the same grand bargain with the radical right that had brought forth the Győr programme. Horthy was so strongly opposed to Szálasi at that time that he would have demanded Darányi's resignation for entering into negotiations with him. Faced with exposure, Darányi stepped down on 13 May. Béla Imrédy was asked to form a government, and as a sop to the right, he named Jenő Rátz to replace Róder as Defence Minister. General Lajos Keresztes-Fischer, the former chief of the Regent's military cabinet and brother of the interior minister, filled Rátz's vacated position as Chief of the General Staff. Keresztes-Fischer held the post only until early October, when Horthy asked him to step aside in favour of Werth.<sup>49</sup>

So it was that Horthy called in Minister of Defence Rátz, Chief of Staff Werth, and head of the Army High Command Hugó Sónyi on 28 October to discuss the future of the air service. The VKF had prepared a memo describing the four competing proposals, arranged

---

<sup>48</sup> Szabó, *MKHL, 1938-1945*, pp. 78-84.

<sup>49</sup> Macartney, *October Fifteenth*, I, pp. 218-21, 274.

on a continuum from Gallo's full independence to a First World War-style field aviation corps. Two days later, Horthy endorsed the Gallo plan. The decision was communicated in a terse note that read, 'Supreme decision: the first option [Gallo's] is desirable. This must be implemented immediately!'<sup>50</sup> The evidence suggests it was Hány's paper, delivered on 26 October, that galvanised Horthy into opting for an independent air force. But the impetus for an organisational modernisation of the service must have been largely provided by the course of events in international affairs, which from August had picked up momentum.

Hitler had scarcely returned from his triumphal tour of Austria when he began to discuss with his generals the details of 'Operation Green', the planned invasion of Czechoslovakia. He expected that Hungary and Poland would participate in order to reclaim territory lost to the government in Prague, but both countries were determined to avoid active participation in a German attack. They were, however, prepared to insist that any concessions granted to the German minority in Czechoslovakia be extended to ethnic Hungarians and Poles. The Hungarian objection was entirely practical. The sabre-rattling had begun just weeks after Darányi's speech in Győr, and the defence and foreign ministries knew they would not be in a position to threaten Czechoslovakia militarily for many months, perhaps years. Furthermore, any Hungarian mobilisation aimed north would leave it open to Yugoslavian or Romanian attack from the south. Imrédy and Kánya therefore pressed Ciano on the issue of Yugoslavian neutrality at a meeting in Rome in July. Ciano had weeks earlier taken up the matter with the Yugoslav Prime Minister, Milan Stojadinović, who promised that Yugoslavia would not intervene in a German-Czech conflict if Hungary also abstained. Hungary could benefit afterward from the German action, Stojadinović agreed, as long as it

---

<sup>50</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 85.

did not take the initiative.<sup>51</sup> Ciano also reported to Villani at the same time that Germany had promised not 'take forceful measures against Czechoslovakia' but rather to 'endure Czech provocations, anticipating that in time, the process of internal disintegration will make it easier to reach a solution.'<sup>52</sup> The Hungarians were not satisfied with Italy's assurances, and therefore sought guarantees from the Germans themselves, who elected to put off such weighty discussions until the Regent's state visit in August.

The official party, consisting of Admiral and Mrs Horthy, Imrédy and his wife, Kánya, Rátz, and Sztójay, arrived at Kiel on the morning of 22 August for the launching of the new German cruiser, the *Prinz Eugen*. Mrs Horthy commissioned the ship and the party observed manoeuvres and a naval review. The fine atmosphere was spoiled later in the day by reports that Hungary had signed a treaty with the Little Entente. The Germans were furious, seeing the treaty as a renunciation of Hungary's claims toward revision, and therefore weakening Germany's own case. Ribbentrop tore into Imrédy and Kánya the next day. The Bled Agreement, he contended, was a stab in the back, 'blocking the road to intervention in Czechoslovakia and making it morally more difficult for the Yugoslavs to leave their Czech allies in the lurch'.<sup>53</sup> Hitler was more tactful with Horthy. He detailed Operation Green and asked Horthy if Hungary would participate, implying that it could keep any territory it subsequently occupied. Horthy, by his own account, declined on the grounds that the Honvéd could not mount such an operation. The Admiral, a great respecter of British naval power, warned the Führer against an armed invasion that might lead to a world war, in

---

<sup>51</sup> Macartney, *October Fifteenth*, I, pp. 234.

<sup>52</sup> *DIMK*, II, No. 240.

<sup>53</sup> Quoted in Macartney, *October Fifteenth*, I, p. 240. This paragraph follows Macartney's account (pp. 238-48), as do most descriptions in later works. In addition to the documentary evidence, C.A.M. made use of personal statements from many of the Hungarian diplomats involved, including his debrief of Horthy in detention in 1945, and is the most complete narrative of the events.

which the Royal Navy would prove decisive. At that point Hitler shouted, ‘Nonsense! Be quiet!’, and Horthy ended the conversation. Another discussion between the two toward the end of the visit was similarly unproductive. Hitler made a little headway with Rátz and Imrédy after he told them ‘he who wants to sit at the table must at least help in the kitchen’.<sup>54</sup> They conceded that Hungary could participate when it was militarily capable and when its southern flank was secured. Kánya also retreated a bit under pressure. He had told Ribbentrop on 23 August that it would take Hungary two years to prepare for conflict, but amended that time on 25 August to less than two months. The officials returned to Hungary somewhat dejected, but their reception at home was enthusiastic. Hungarians were revisionists almost to a man, but they were not eager to follow Hitler into war (yet), and the stories of Horthy and his ministers standing up to the Germans’ bluster raised the government’s standing considerably.

Regarding the negotiations with the Little Entente, the Hungarian position was that the ‘Bled Agreement’ was in fact three separate accords, and that the pledge of non-aggression was not operable until Hungary was satisfied with the condition of its national minority within the other state. The foreign ministry emphasised this distinction in a cable to all its embassies on 23 August. It had concluded a ‘gentlemen’s agreement’ with Romania and Yugoslavia concerning minority rights, but the ‘finalisation of the entire agreement-complex’ with Czechoslovakia remained an open question.<sup>55</sup> In any case, the Bled conference left all sides temporarily satisfied. The Little Entente thought it had gained Hungary’s pledge of non-aggression in exchange for acknowledging a rearmament that was already under way. Hungary, on the other hand, saw the key enabling feature of Trianon—

---

<sup>54</sup> Quoted in Gy. Juhász, *Hungarian Foreign Policy*, p. 140.

<sup>55</sup> *DIMK*, II, No. 298.

its forced disarmament—crumble, at the price of a promise not to attack two countries (Romania and Yugoslavia) that its patrons had already placed off limits. All four states were in retrospect hopelessly naive in believing that treaties among them would make any difference at all to the great powers who really controlled their fates. Romania and Yugoslavia were protected because they were useful to Germany and Italy, and Czechoslovakia was doomed because Germany had designs on it.

For Hungary's armed forces, the Bled agreements were a welcome relief from the burden of secrecy. Its rearmament programme had been increasingly apparent in the months since the Győr speech, but the need to cloak its prohibited branches was a drag on efficiency. New orders for aeroplanes and tanks did not spike in September 1938, because Italy and Germany had long been complicit in Hungary's clandestine rearmament. But recruiting for the air service and armoured corps could now begin publicly, and the organisational structures no longer needed to be distorted through disguise.

Among the most visible symbols of Hungary's new status were the red-white-green chevrons that appeared from 15 September on the wings and rudders of aeroplanes that the day before had been part of an 'Airmail Company', 'Meteorological Section', or civilian flight school. The same Defence Ministry order that specified the national aircraft markings also adopted for the air force the uniform worn by LÜH officials.<sup>56</sup> That date marked the end of the evasion of Trianon's air clauses that had begun nineteen years earlier, when the war ministry's 37th Section had vowed to abrogate the treaty in order to maintain the nucleus of an air force. The LÜH in September 1938 comprised 196 combat aeroplanes organised in twenty-five squadrons: ten bomber squadrons, primarily equipped with Ju-86s; six fighter squadrons armed with CR-32s; seven short-range reconnaissance squadrons flying He-46s

---

<sup>56</sup> 40,028/Eln. B.-938 IX. 14., cited in Winkler, 'Magyar repülés története', HL Tgy 3.327.

and WM-21s; and two long-range reconnaissance squadrons operating He-70s.<sup>57</sup> The air service had been officially acknowledged for only three weeks when it received its first mobilisation order, in response to the crisis in Czechoslovakia.

The German High Command was prepared to execute Operation Green on 1 October, the date that Kánya had told Ribbentrop the Honvédség would be ready for intervention.<sup>58</sup> Hitler's plans were not dependent on Hungarian participation, but he hoped to use a Czecho-Hungarian border skirmish as his reason for abandoning negotiations and initiating military action. The Führer suggested just such an arranged provocation to Imrédy before the second round of talks with British Prime Minister Neville Chamberlain in late September. Imrédy had gone to Berlin to ask Hitler to endorse the same rights for the Hungarian minority in Czechoslovakia as he extracted for the Sudeten Germans. Hitler was in no mood to coddle Hungarians one month after the 'stab in the back' at Bled, and he suggested to Imrédy that, if satisfactory agreement was reached on the Sudeten problem, he 'would have no moral title to raise further demands either before the world or himself, and cannot make his standpoint subject to the treatment of other nationalities.'<sup>59</sup> A Hungarian invasion that offered Germany a *casus belli*, however, would be an entirely different matter, and Budapest could then expect to reap substantial rewards. Imrédy was unwilling to risk war alone against Czechoslovakia (and perhaps France and Britain as well), and he did not agree to Hitler's scheme. The Foreign Ministry instead launched a diplomatic offensive against Prague, demanding the return of majority Magyar areas, and autonomy for Slovakia and Ruthenia.<sup>60</sup>

---

<sup>57</sup> Cs. Stenge, *Baptism of Fire: The First Combat Experiences of the Royal Hungarian Air Force and Slovak Air Force, March 1939* (Solihull, 2013), p. vii.

<sup>58</sup> Shirer, *Rise and Fall of the Third Reich*, p. 377.

<sup>59</sup> Imrédy, quoted in Gy. Juhász, *Hungarian Foreign Policy*, p. 141.

<sup>60</sup> *Ibid.* p 142-3.

Although Imrédy did not intend open conflict with Czechoslovakia, he did initiate actions to improve Hungary's military readiness. The LHT ordered a limited mobilisation of two years' recruiting classes, and Imrédy wrote to Mussolini to ask for the deployment of eight Italian fighter squadrons under Hungarian colours. Action on that request was delayed until German intervention obviated the need, but the remarkable change in circumstances is worth considering: just six weeks earlier a secret Italo-Hungarian aviation deployment would have been arranged so as to hide prohibited Hungarian capability. Now the concern was to reinforce Budapest's air defences without acknowledging Italian assistance. On 23 September, the air service issued its own limited mobilisation order for reservists to report for 'manoeuvres', and three days later a restricted flight zone was established around Budapest. Aircraft that did not comply with published arrival and departure routes risked being shot down.<sup>61</sup> A large air-defence exercise was held in the capital on 26 September. The Air Defence League simulated mustard gas and incendiary attacks, and firemen responded to a smoke pot on the roof of the stock exchange. Photographs of the event show families scurrying into shelters, decontamination teams trying to contain the spread of the mock gas, and what might have been the first overflights of the capital by aeroplanes bearing the new national chevrons.<sup>62</sup>

When the terms of the Munich Pact were announced on 29 September, Budapest found to its disappointment that its claims had not been settled by the four powers, but were to be reconciled through bilateral negotiations within three months. Imrédy decided to force the issue. The Foreign Ministry demanded plebiscites in Slovakia and Ruthenia, de-mobilisation of Hungarian soldiers in the Czechoslovak army, and the release of Hungarian political

---

<sup>61</sup> Veszteányi, 'A magyar katonai repülés', pp. IV/159-60.

<sup>62</sup> S. Rakolczai, 'Légvédelmi és légoltalmi gyakorlatok Budapesten' *Riadó!* 2/10 (Oct. 1938) pp. 294-8.

prisoners.<sup>63</sup> On 6 October, irregular forces known as the Ragged Guard (*Rongyos Gárda*) began to infiltrate into Slovakia disguised as foresters, with orders to attack targets of military significance, such as bridges and railroads, and to prepare ethnic Hungarians to support a possible armed incursion from Budapest.<sup>64</sup> The same day the entire air service, with the exception of the 4th and 5th Short-range Reconnaissance Squadrons at Pécs and Szeged, was put on alert. Units were to disperse to their combat airfields and be ready for operations from noon on 7 October. The squadrons did not meet the 7 October mobilisation goal, but a report from 10 October showed the short-range reconnaissance units subordinate to the mixed brigades were in place, along with the four bomber squadrons of the 1st Aviation Brigade. Army high command initially retained control of fighter and long-range reconnaissance squadrons, but on 24 October those were released to the 1st Aviation Brigade.<sup>65</sup>

Diplomatic negotiations continued while Hungary and Czechoslovakia mobilised. When officials from the two states met at Komárom on 9 October, Prague was represented by Slovak separatists, who were ill prepared for detailed discussions and disinclined to bargain.<sup>66</sup> The talks made little progress and broke off after four days. Horthy also appealed to Hitler, Mussolini, and Chamberlain. Darányi went to Munich, Csáky to Rome, and Horthy invoked Chamberlain's brother Austen (who had visited Hungary and met with Horthy in 1936) in his letter to the British prime minister.<sup>67</sup> Mussolini was supportive, Chamberlain non-committal, and Hitler truculent. Darányi, who was no longer in the

---

<sup>63</sup> Ibid. pp. 142-3.

<sup>64</sup> L. Dombrády, *Hadsereg és politika Magyarországon, 1938-1944* (Budapest, 1986), pp. 10-11; foresters: Macartney, *October Fifteenth*, I, p. 279.

<sup>65</sup> Veszteányi, 'A magyar katonai repülés', pp. IV/160-2.

<sup>66</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 143.

<sup>67</sup> *Confidential Papers of Admiral Horthy*, pp. 104-10.

government but was thought to be well-regarded by Hitler, met Hitler on 14 October to secure German support of a Hungarian attack on Czechoslovakia. Hitler, not surprisingly, opposed this, and denounced Hungary for failing to act earlier at his suggestion. When Darányi showed him a map of the ethnic Hungarian regions that Budapest claimed, Hitler scolded him. ‘Once I offered you all Slovakia. Why didn’t you take it then?’<sup>68</sup> Hitler eventually agreed to consider arbitration, and Darányi, after telephone consultation with Budapest, offered to adhere more closely to the Axis line, and perhaps join the Anti-Comintern Pact. Hitler pushed: would Hungary leave the League of Nations? Darányi did not commit to that course, but advanced the prospect of economic concessions. The Führer then agreed that Hungary ought to receive additional German arms. Thus ended Darányi’s audience. For three days there were no diplomatic advances, but during this time both sides increased their mobilisation. Hungary announced the call-up of five more classes, bringing its total force to near 300,000, and Czechoslovakia reinforced its position in the east to nineteen divisions. The period from 19 to 28 October was filled with cables and consultations, as the final composition of the arbitration conference was debated (would Poland and Romania be included to help dispense with Ruthenia?) and likely outcomes were mooted. Finally, on the 29th, Hungary and Czechoslovakia officially invited Germany and Italy to resolve the dispute, agreeing ahead of time to accept the Axis decision.<sup>69</sup> That decision was announced on 2 November 1938 in Vienna’s Belvedere Palace, and awarded Hungary over 4,500 square miles and roughly one million inhabitants, the majority of whom were Magyars (57 per cent according to Prague’s numbers, 86 per cent according to Budapest’s). Hungary received the disputed cities of Kassa, Ungvár and Munkács, but did

---

<sup>68</sup> Quoted in Macartney, *October Fifteenth*, I, pp. 290.

<sup>69</sup> *Ibid.* pp. 293-302.

not gain Pozsony or Nyitra. Critically, Czechoslovakia also retained Ruthenia, disposition of which was not taken up by the arbiters. Hungary and Poland were intent on joint seizure of the area in order to obtain a common border, which would improve each country's strategic position and enhance military and economic cooperation between them.<sup>70</sup>

No major military confrontations erupted between Hungarian and Czechoslovak forces during the time of the First Vienna Award, but along with the activities of the Rongyos Gárda there were a number of minor aerial incidents, including one that resulted in the destruction of a Czech reconnaissance aeroplane. From the middle of October, aircraft on both sides had committed border incursions, conducting reconnaissance, propaganda leaflet drops, and strafing attacks. On 25 October, Lieutenant László Pongrácz of the 1/2 Fighter Squadron was on a routine patrol along the Danube when he and his wingman violated standing orders and crossed into Czechoslovakian airspace in their CR-32s. Approaching the Érsekújvár airfield, they attacked and shot down a Czech Letov Š-328. The Letov crashed and burned, killing the observer.<sup>71</sup> Pongrácz's action was controversial among other Hungarian pilots. According to the memoirs of Mátyás Pírity, a CR-32 pilot in the 1/1 Fighter Squadron, Pongrácz's victim was a trainer in the landing circuit. Because of that, Pírity recalled, 'Opinion was divided regarding this feat of arms, but the majority of pilots condemned both the effect of the action and the downing of an unarmed training aeroplane.'<sup>72</sup> Pongrácz was ultimately cleared of wrongdoing by a military tribunal. He was awarded the Bronze Medal for his 'energetic and forceful activity that greatly helped to decrease the Czech intrusions' during the period from 23 September to 25 November. The actual downing of the Letov was not mentioned in his citation, but no other pilots received

<sup>70</sup> Cartledge, *Will to Survive*, p. 374, and Gy. Juhász, *Hungarian Foreign Policy*, p. 144.

<sup>71</sup> Stenge, *Baptism of Fire*, p. vii.

<sup>72</sup> M. Pírity, 'Visszaemlékezés', *Hadtörténelmi Levéltár Tanulmánygyűjtemény* 3.707, p. 100.

decorations for patrols in this time.<sup>73</sup> Despite the award, his fighter group commander, Major János Schwager, regarded the incident as a failure of flight discipline.<sup>74</sup>

This incident, although inconsequential in light of the carnage to come, is nonetheless intriguing. Not only was it the first air-to-air victory in two decades for the newly acknowledged Hungarian air force, but it also parallels Hungary's conduct of foreign policy in the years immediately preceding the Second World War. Like Lieutenant Pongrácz (whose political views are unknown), the radical rightists were aggressive in pursuit of their adversaries, and were willing to overstep the bounds established by higher authorities. Much of Hungary's political centre reacted to these tactics as did Mátyás Pirity and his squadron mates: not opposed to the action in principle (fighter pilots exist, after all, to shoot down enemy aeroplanes), but put off by the whiff of dishonour in the particular circumstances. When tried by the tribunal of public opinion, however, the radicals' results (among them the Vienna awards) won acclaim. The Regent nonetheless came to distrust them, and, as Schwager did to Pongrácz, sought to shunt them away as soon as possible.

But first the Regent would lead the ceremonial reinvestment of the Felvidék. It was a time of national celebration, capped by the procession into Kassa on 11 November. Admiral Horthy entered Kassa astride his white horse, just as he had entered Budapest in 1919. This time he was followed by members of the cabinet and the entire legislature. Thousands turned out to cheer the event, including Lord Rothermere, Hungary's favourite foreign son.

---

<sup>73</sup> Stenge, *Baptism of Fire*, p. viii.

<sup>74</sup> Pirity, 'Visszaemlékezés', HL Tgy 3.707, p. 100. Pongrácz continued to be an aggressive and unpredictable pilot. One year after the Letov shootdown, during a similar crisis with Romania, he crossed the border in an apparent attempt to confront Romanian fighters. He was subsequently posted to the Aviation Research Institute (Repülő Kísérleti Intézet) as a test pilot, and after further incidents forced to retire in 1943. Stenge, p. 114.

Parliament incorporated the awarded areas back into the country the following day.<sup>75</sup> The problem of Ruthenia remained, and Hungary determined to launch an attack, preferably with Polish assistance and Axis approval, as soon as one week hence. Poland, however, declined to offer regular troops for the endeavour, and Italy deemed Ruthenia outside its area of interest. Berlin was strongly opposed, and even warned Budapest that such an act risked invalidating the Vienna award. Horthy was unwilling to take the step alone, and so the plan was shelved and troops demobilised. There were, as always, political consequences of the debacle. Imrédy offered his resignation, but Horthy declined to accept it, fearing the dismissal of a prime minister well-liked in Berlin would further strain relations with Germany. Instead, he asked Kánya to go, and appointed Kánya's deputy István Csáky, held in higher esteem by the Germans, in his place.<sup>76</sup> The aborted occupation of Ruthenia was a diplomatic disaster for Hungary, and also had unfortunate domestic consequences, weakening the conservative dissidents and pushing Imrédy, formerly thought to have a pro-western orientation, closer to the Nazis.

The most obvious result of Imrédy's increasing fidelity to the Nazi line was his introduction in parliament of the second Jewish Law. This measure drew the definition of a Jew more broadly than the earlier bill, and further reduced the percentages of Jews permitted in the professions. Ironically, Imrédy's political opponents used his own anti-Semitic law to force him out, by producing documents unearthed in Bohemia purporting to show that one of Imrédy's great-grandmothers was Jewish. Horthy was therefore able to secure Imrédy's

---

<sup>75</sup> Macartney, *October Fifteenth*, I, p. 305.

<sup>76</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 147-8.

resignation on grounds that Berlin could not fault. The Regent appointed Count Pál Teleki to the premiership on 16 February 1939.<sup>77</sup>

Teleki was Hungary's fifth prime minister in the eight years since the end of Bethlen's decade of consolidation. Like Darányi and Imrédy before him, Teleki owed his appointment in part to Horthy's hope that he could maintain the country's free hand in foreign affairs. The esteemed geographer and chief Scout ultimately fared no better in this regard than did his predecessors, though his dramatic suicide following Hungary's 1941 decision to assist the German invasion of Yugoslavia did much to salvage his political reputation. In early 1939, Teleki left Csáky in place at the foreign ministry, and did not repudiate Imrédy's announcement that Hungary would join the Anti-Comintern Pact. Nor did he dismiss parliament or replace the Imrédyists in the government. Against the Arrow Cross, however, Teleki took decisive action, dissolving the party, arresting some of its leaders, and confiscating its records and assets.<sup>78</sup> He continued to press Hungary's claims on Ruthenia, adding economic and geopolitical rationales to what he considered flimsy ethnic justifications. As it became more evident that a German invasion of Czechoslovakia was looming, Teleki was determined that Hungary would be the first to occupy Ruthenia. Matters came to a head one month into his tenure. On 12 March, Hitler informed Sztójay that the operation was imminent, and that Hungary would have twenty-four hours after it began to settle its case in Ruthenia. Hungary agreed to provide a pretext for the invasion, which was planned for 18 March. The Slovakian declaration of independence on 14 March

---

<sup>77</sup> Macartney, *October Fifteenth*, I, pp. 323-8.

<sup>78</sup> *Ibid.* pp. 330-1.

rushed events ahead, and on 15 March Hungarian troops moved north into Ruthenia at the same time as the Wehrmacht headed toward Prague.<sup>79</sup>

The mobilisation initiated by Budapest in March 1939 included a new element: the independent Royal Hungarian Air Force (*Magyar Királyi Honvéd Légierő*, MKHL). The MKHL was established on Admiral Horthy's orders as supreme war lord along the lines agreed in October 1938. Effective 1 January 1939, the Defence Ministry's aviation group was disbanded, and its responsibilities assumed by the LÜH and the air force headquarters commanded by Colonel Hány. This new Lepság was subordinate only to the Defence Ministry, 'operating independently and autonomously' (*függetlenül, önállóan működik*) of the HFP and VKF.<sup>80</sup> This arrangement meant that the HFP must seek permission from the Lepság on matters of air-ground cooperation—a situation that surely would limit the 'frittering away' of air power feared by Szentnémedy. The air HQ also gained its own budget, officer promotion and assignment authority, and discretion in building airfields. General Károly Bartha, who replaced Rátz in November as Defence Minister, retained control over the deployment of MKHL squadrons, and insisted that Hány consult the Ministry on organisational matters.<sup>81</sup> Not everyone was pleased by this initiative. The VKF went on the record with its dissent on 5 January. It argued that the HFP must have a direct relationship to the LÜH director, or else the office of aviation inspector would be superfluous. Regarding the LÜH, the general staff also contended that the role of air force commander was a sufficient challenge in itself, and therefore the direction of civilian aviation should be separate from the Lepság. Furthermore, to ensure military readiness, there should be an aviation section established within the VKF, and a VKF officer should head the

<sup>79</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 151-4.

<sup>80</sup> Order quoted in Szabó, *MKHL, 1938-1945*, p. 86.

<sup>81</sup> *Ibid.*

Lepság's mobilisation division.<sup>82</sup> These objections of the general staff were not sufficient to overturn the Regent's decision, but they did signal the VKF's displeasure with the organisational change.

With such short notice, the LHT had to execute the Ruthenian operation with only the forces already positioned near Upper Hungary. General Ferenc Szombathelyi's Carpathian Group consisted of VIII Corps (three brigades) and the Rapid Corps (one cavalry, one bicycle, and one motorised brigade). Lepság assembled a provisional aviation group under the command of Lieutenant Colonel Sándor Illy, a future commandant of the Kassa aviation academy and MKHL general. Illy's group was composed of Ju-86s from 2/II and 3/II Bomber Groups, and the three CR-32 squadrons of 1/I Fighter Group. He-70s from the 1st Independent Long-Range Reconnaissance Group at Kecskemét and Budaörs also participated in the action, as did the He-46s from the 6th and 7th Short-range Reconnaissance Squadrons at Debrecen, Miskolc, and their forward operating base at Ungvár. The Carpathian Group met little organised resistance and advanced quickly. On the 16th, He-46s attacked Czechoslovak troop formations, and the following afternoon, a pair of Ju-86s bombed defensive positions from high altitude. In both cases, Hungarian ground forces reported that the raids were successful. Szombathelyi's troops reached the Polish border on 17 March, suffering only 220 casualties in the attack. The northern border secured, Szombathelyi turned his attention to the west. Hungary had recognised the new Slovakian state, but its eastern boundary was not yet agreed, and Budapest was eager to seize as much territory as possible before Berlin intervened. There were compelling strategic reasons as well, since the critical railway link with Poland lay near the frontier claimed by

---

<sup>82</sup> Veszteányi, 'A magyar katonai repülés', pp. V/5-6.

Slovakia and could be subjected to harassing attacks. On 23 March, the VKF ordered the Carpathian Group to advance westward up the Ung valley.<sup>83</sup>

Slovak reconnaissance aircraft spotted the Hungarian advance at mid-day. Several flights of Letov Š-328s and Avia B-534 fighters were launched from airfields south of Kassa with orders to attack Szombathelyi's force. Two B-534s from 45 Squadron were shot down by the machine gun detachment of the Hungarian 9th Light Artillery Regiment, and seven other Slovak aeroplanes were damaged in action on 23 March. The Slovak attacks killed one Honvéd soldier. MKHL air activity on 23 March was limited to a few reconnaissance sorties. The following day, the Slovaks again sent three-ship formations of Avias and Letovs on low-altitude attack sorties. Three B-534s from 49 Squadron met three CR-32s of the 1/1 Fighter Squadron over the town of Szobránc. The Hungarians from the 'Íjász' (Archer) squadron, led by Lieutenant Aladár Negró, had been scrambled from Ungvár airfield after ground observers reported the inbound Slovak aircraft. Negró and one of his wingmen, Sergeant Sándor Szoják, each scored a victory against the Slovak B-534s. Another Avia was downed by Hungarian AAA. Later in the day, the entire Íjász squadron was airborne with its commander, Lieutenant Béla Csekme, in the lead. They spotted and attacked three Š-328s who had just completed an attack against a Hungarian battery. The CR-32 pilots destroyed two of the Letovs in that engagement, and subsequently downed three more Avias. Negró and Szoják claimed their second victories of the day. The Slovak air force lost eight aeroplanes in combat on 24 March, although their attacks were more effective than the day before, resulting in fifteen Honvéd deaths.<sup>84</sup> No MKHL fighters were lost to enemy action,

---

<sup>83</sup> Stenge, *Baptism of Fire*., pp. 19-22. Casualty numbers: Macartney, *October Fifteenth*, I, pp. 341.

<sup>84</sup> Stenge, *Baptism of Fire*., pp. 40-4.

but one CR-32 was shot down by Hungarian AAA. The pilot, Sergeant Árpád Kertész of 1/1 Squadron, bailed out without injury.<sup>85</sup>

The Hungarian bomber force conducted its first raid on 24 March. Lepság ordered the 2/II and 3/II Bomber Groups to strike the airfield at Igló (Spišská Nová Ves), from which the Slovak attacks had been launched. The attack was a rushed affair, since the order arrived at 14.55, and the sun would set just three hours later. The MKHL's Ju-86s were not equipped, nor their crews trained, for night-time operations. Major Elemér Kovács, the commander of 3/II Bomber Group, was to lead the attack, and he placed himself in a gunner's position in the fourth bomber. Fourteen Ju-86s, six from 3/4 and eight from 3/5 Squadron, planned to attack in a column of three-ship V formations, each aircraft bearing 660 kilograms of fragmentation bombs along with sixty-four one-kilogram incendiaries. The bombers expected to rally with 2/II's Ju-86s over Miskolc and join the escorting CR-32 before proceeding on to Igló. The plan was simple, but adequate for a first large mission against an unsophisticated opponent. Unfortunately, the strike group ran into difficulties on the ground that were compounded by errors in flight. The first flight of Ju-86s took off late from Debrecen due to a heavier bomb load causing the aircraft to sink into the mud. When the lead pilot, Lieutenant Edvin Joubert, caught up with the rest of the force over Miskolc, he could not reach them over the radio. Joubert assumed the formation would follow his flight, and he promptly flew into clouds. The other bombers did not trail the mission commander's section, which was just as well, since Joubert got disoriented in the clouds and exited them heading south instead of north. Finding a huddle of buildings and a clearing, Joubert's crew dropped its load. His wingman, Lieutenant Győző Lévy, recognised the area as being inside Hungary, and did not release his weapons. The flight made its way back to

---

<sup>85</sup> Purity, 'Visszaemlékezés', HL Tgy 3.707, p. 109.

Debrecen and landed. One of the 3/5 Squadron aeroplanes experienced an engine failure and turned back. Another aircraft accidentally dropped its bombs en route to the target while still over Hungary. Captain Gyula Vághelyi led the remaining ten bombers (including the one with the empty bomb bay) north at 3,000 feet. They reached the target at 16.45 and dropped their bombs without receiving effective anti-aircraft fire. The attack damaged twelve Slovak aircraft and killed thirteen—five soldiers and eight civilians. One Avia fighter took off after the attack, but was unable to catch the southbound Ju-86s. None of the aircraft from 2/II Bomber Group participated. Conflicting information about bomb loads had delayed their take off from Szombathely, and on a refuelling stop at Mátyásföld they were informed that the mission had been completed. There was little air activity on 25 March, and the following day Hungary and Slovakia signed an armistice.<sup>86</sup>

The public response to the MKHL's initial foray into combat operations was enthusiastic. Admiral Horthy authorised a special order on 25 March that included the following:

On 24 March 1939, elements of our fighter and bomber units were ordered into combat for the first time. Our fighter forces annihilated the enemy air elements, our bombers performed their task—according to reports received so far—with ‘horrible’ effect. They achieved these results without any personnel or material losses despite the enemy’s efforts.

The Regent acknowledges the news of these events with great pride and pleasure, because they confirm to him our young Air Force’s outstanding quality.<sup>87</sup>

*Magyar Szárnyak* carried a full-page in-house advertisement that included the text of the telegraph agency’s 25 March report from the front above a poster-style celebration of ‘the young Hungarian Air Force’s glorious feats of arms’.<sup>88</sup> *Riadó!*, in keeping with its mission,

---

<sup>86</sup> Stenge, *Baptism of Fire*., pp. 60-6; J.R. Gaal, ‘Baptism of Fire’, *Aero Album* (Winter 1972), pp. 42-4; D. Eszenyi, ‘Igló bombázása’, *Magyar Szárnyak* (1986) pp. 5-7.

<sup>87</sup> Cited in Stenge, *Baptism of Fire*., p. 84.

<sup>88</sup> *Magyar Szárnyak* 4/1939, p. 25.

focused on the damage done to Ungvár as a result of the Slovak attacks on 23 March.<sup>89</sup>

Colonel Szentnémedy called 24 March ‘Hungarian military aviation’s day of triumph’, and noted ‘the military actions attracted the attention of the whole world.’

Italian magazines recounted in detail the events on the Hungarian-Slovak border and the success of Hungarian fliers. *Stampa*’s Budapest correspondent declared that the Hungarian aviators’ first serious appearance was splendid, and they performed brilliantly.

The *Messaggero* and *Corriera della Sera* stated the battle that was played out beside Ungvár showed the Hungarian fliers to great advantage.

Almost all the English papers published the news agencies’ reports about the Slovakian fighting. Reuters reported: ‘It was a time of great jubilation in Hungary because of the striking success of the Hungarian defence fighters.’ On the editorial pages they write with great appreciation about the performance of the Hungarian fliers. The German papers are the same.

The Hungarian and Slovak battles were covered in detail in *Der Bund* and the *Journal de Genève*. The *Neue Zürcher Zeitung* stressed the Hungarian pilots’ daring fights. According to the article: ‘Such was the drive with which the Hungarian fliers beat back the Slovak attacks that the Honvédség increased its prestige in the most significant way.’

... We can see that in the air we are no longer weak, and we can see the Hungarian aviators wing triumphantly in the spring sky, without opposition, with the wonder and acknowledgment of the whole world, accompanying our Honvéd as they take possession of the ancient borders!<sup>90</sup>

Szentnémedy viewed the actions as the realisation of Horthy’s prophecy given a year earlier:

‘We were a riding nation, we will become a flying nation.’<sup>91</sup> Eighteen fighter pilots and ten bomber crews were awarded medals for their deeds. Aladár Negró and Sándor Szóják received the title *vitész* for their double victories, and in keeping with a time-honoured martial tradition, the men changed their surnames to Szobráczy and Szobranci, reflecting the location of their triumphs.<sup>92</sup>

<sup>89</sup> ‘Slovák légitámadás Ungvár és környéke ellen’, *Riadó!* 3/4 (Apr. 1939), pp. 102-3.

<sup>90</sup> F. Szentnémedy, ‘A magyar légierő első diadala’, *M KSz*, 6/1939, pp. 115-17.

<sup>91</sup> *Ibid.* p. 118.

<sup>92</sup> Stenge, *Baptism of Fire*., pp. 109, 85.

The official assessment of the operation had quite a different tone. The HFP concluded that the Igló attack was characterised by ‘lax readiness and lack of discipline’.<sup>93</sup> Its report noted that the 3/II strike force took off without permission, failed to notice its command aeroplane’s navigational error, and suffered from deficiencies in reading maps and operating radio equipment. The panel recommended the MKHL’s training practices be modified to standardise the placement of the mission commander in the formation (Major Kovács, riding in the gunner’s compartment with a faulty microphone, could not communicate inside or outside the aeroplane), and to clarify the definitions of squadron readiness. The MKHL also established more stringent requirements for claiming aerial victories (the Hungarian fighter pilots claimed nine kills, but only seven Slovak fighters were lost in air-to-air combat).<sup>94</sup> Colonel Hány took administrative and judicial action against a trio of MKHL officers. He removed Kovács from command of the 3/II Bomber Group, and confined Lieutenant Joubert and Warrant Officer Elsner, the pilot and navigator who mistakenly bombed the Hungarian hamlet, to garrison custody for fifteen days.<sup>95</sup>

This brief conflict is worthy of extensive consideration because it was, as two authors named their studies, the ‘baptism of fire’ for the Royal Hungarian Air Force. The existence of the force had only been acknowledged for eight months, and it had been independent from the army for just three months. It was Hungary’s first aerial combat, other than Pongrácz’s encounter in November 1938, since the Czechoslovak-Romanian interventions in 1919. An entire generation of Hungarian airmen had served without combat experience, and indeed, with little sophisticated or large-scale tactical training. These factors give this single day’s battle a special significance. In the years that followed, there would be hundreds

---

<sup>93</sup> Veszteányi, ‘A magyar katonai repülés’, pp. V/206-7.

<sup>94</sup> Ibid.

<sup>95</sup> Stenge, *Baptism of Fire*., p. 85.

of days on which the MKHL would be engaged in more numerous and more desperate fights than it experienced on 24 March 1939. But those days would come in a different context, against a different enemy, and with a much higher cost. The short Slovak war was fought in direct support of the country's primary foreign policy objective—regaining territory lost at Trianon—and its air battles, conducted by the arm explicitly proscribed by the Treaty, were doubly relished by revisionists.

The defeat of Slovakia cannot, however, be seen as a vindication of the 1935 objective 'to be able to act as a serious opponent against at least one of the Little Entente states'. The rump Slovak air service, although it retained front-line aeroplanes with the Czechoslovakia roundels, was patched together hurriedly and suffered particularly from a lack of experienced pilots. Fewer than 5 per cent of the officers of the Czechoslovakian armed forces were ethnic Slovaks, and hardly any Czech pilots remained to serve in the Slovak air force.<sup>96</sup> The MKHL faced only two Slovak fighter squadrons; one-tenth of the number Szentnémedy had attributed to Prague in 1938.<sup>97</sup> It enjoyed a local numerical superiority that would not have existed in a fight with Czechoslovakia before the German dismemberment. On the other hand, Hungarian fighter pilots in Fiat CR-32s completely dominated the Slovaks flying Avia B-534s, in spite of the Avia boasting better performance and heavier armament than the Italian machine.

The MKHL's lopsided victory in older and less capable aeroplanes made Hungarian claims of 'glorious feats of arms' seem not entirely improbable. It must be noted, however, that an air defence scramble is a relatively simple manoeuvre that rewards individual initiative and skill, while a planned multi-group bomber attack requires a more sophisticated

---

<sup>96</sup> 5 per cent: *ibid.* p. 23.

<sup>97</sup> Two fighter squadrons: *ibid.*; p. 21: F. Szentnémedy, 'Visszapillatás a légügyi múlt évi fejlődésére', *MKSz*, 1/1938, p. 124.

organisation. Fighter aircraft are simpler to maintain and arm (one engine, one type of primary weapon), and defensive air patrol is essentially reactionary and requires little pre-mission preparation. Multi-engine bombers are more demanding to prepare for flight (more engines, multiple types of bombs to load in addition to the defensive armament), and the mission execution requires more pre-flight planning. The fact that the fighter pilots emerged from the long period of clandestine operations more proficient than bomber crews should be no surprise.

Satisfaction with the aeroplanes themselves reflected that dynamic. The MKHL was pleased with the CR-32s' performance, and looked forward to the impending arrival of the newer Fiat CR-42s in the summer. It also was happy to take delivery in 1940 of thirty-six more CR-32s formerly of the Austrian air force for which the Luftwaffe could find no use. Even the Ju-86, which Hány and Horthy maligned in October 1938, acquitted itself reasonably well. Two Junkers aborted the mission for mechanical problems, probably due to malfunctioning spark plugs. The other difficulties encountered by the strike force could be traced to poor procedures and insufficient training. Captain Dénes Eszenyi, the commander of the squadron to which seven of the nine effective Igló bombers belonged, offered in *MKSz* concrete training techniques for all the duty positions in the Ju-86: gunner, radio operator, navigator, and pilot.<sup>98</sup> The MKHL would wait two years for another test of its own bombing prowess, but in September 1939, Hungarian airmen watched closely the Luftwaffe's devastating air campaign in Poland.

In the spring of 1939, the sine wave of Hungarian foreign policy brought the country closer to Germany. In addition to joining the Anti-Comintern Pact in February and accepting

---

<sup>98</sup> D. Eszenyi, 'Támpontok a bombázó hajózó személyzet kiképzéséhez', *MKSz*, 2/1940, pp. 422-431.

the German-brokered Vienna award in March, Hungary left the League of Nations in April. Csáky and Teleki accepted Axis leadership and promised to follow the Axis line, except regarding a possible German action against Poland. They delivered this message in person to Rome in April, and again to both Axis capitals via letter in July. Hungary's refusal to facilitate a German invasion of Poland caused another rift in the Berlin-Budapest relationship. It left the Italians merely 'disappointed'; the Germans were furious.<sup>99</sup> They froze armament deliveries and refused to discuss future purchases. Under pressure from Ribbentrop, Csáky relented and asked that the letter renouncing force against Poland be considered withdrawn.<sup>100</sup> Hungarian opinion turned strongly against Germany, as Csáky relayed to Ciano on 18 August. 'Ninety-five per cent of the Hungarian people hate the Germans,' Csáky asserted, before repeating the Regent's characterisation of them as 'buffoons and brigands'.<sup>101</sup> Then came word of the German-Soviet Non-Aggression Pact. Nothing could have hardened Hungarian attitudes more. The government was determined to maintain its common border with Poland and offer Germany no assistance. Teleki sent a private message to London to this effect. With the Soviet Union's cooperation assured, Hitler did not feel the need to coerce Hungary in the matter, and therefore Teleki's claim that Hungarian troops would resist German advances went untested.<sup>102</sup>

The Air Defence League magazine *Riado!* covered in photographs and print the devastating effect of the German combined-arms assault on Poland. The magazine even used the term 'lightning war' (*villámháború*) to describe the tactic, following the example of the German press in coining the phrase 'Blitzkrieg', a word not seen in Luftwaffe doctrine. The

---

<sup>99</sup> *Ciano's Diary, 1939-1943*, M. Muggeridge, ed. (London, 1947), p. 118.

<sup>100</sup> Macartney, *October Fifteenth*, I, p. 360.

<sup>101</sup> *Ciano's Diary*, p. 129.

<sup>102</sup> Macartney, *October Fifteenth*, I, pp. 360-3.

pictures showed evidence of indiscriminate city bombing—Wehrmacht troops marching through Polish streets flanked by the charred walls of hollow buildings—as well as the results of highly accurate tactical strikes—an armoured train destroyed by a bomb dropped expertly between two rail lines. Its correspondent acknowledged that the Luftwaffe had many advantages, including good weather, accommodating terrain, and a numerical edge. Those were external conditions, he contended, and did not account for the internal factors that contributed to the victory, such as ‘excellent leadership, a highly offensive-minded air fleet, and carefully produced aviation material, all the result of years of work.’

The fact is, the air superiority quickly established by the German air force...made possible the successful realisation of the German leaders’ numerous large-scale strategic conceptions, and therefore brought the victory. This successful air campaign proved that what the Italian general Douhet and the German field marshal Göring had proclaimed in theory, and what had been demonstrated in the dozens of military and civil-military clashes since the World War, was in fact true: the air force has the capability to decide wars (*a légi haderő a háború eldöntésére képes*).<sup>103</sup>

That Blitzkrieg was offered as an example of Douhet’s wisdom shows how the understanding of the Italian’s thought had expanded to encompass any operational concept that included a significant role for air power. Douhet himself rejected the close air-ground cooperation that defined German doctrine in Poland. A Douhetian armed force would have had none of the potent German armour, and its air campaign would have seen Warsaw’s civilian population as the critical target. The Luftwaffe, in contrast, aimed first to destroy the Polish air force while it was still on the ground, before turning its attention to the rail network and then Polish army forces in the field.<sup>104</sup> Hungarian airmen were drifting away from strict Douhetism without losing any faith in air power’s effectiveness. This shift was evident in a March 1940 MKSz article by a MKHL fighter pilot who discounted the idea of

---

<sup>103</sup> ‘Az első légi hadjárat’, *Riado!* 3/12 (15 Nov. 1939), p. 314.

<sup>104</sup> Corum, *The Luftwaffe*, pp. 272-3.

an independent air war, asserting instead that the air force was ‘the ground force’s most decisive instrument’.<sup>105</sup> Although this article did not specifically mention the defeat of Poland, the success of the German combined-arms campaign there was the best example of air power used to decisive effect in conjunction with the land component. The seamless cooperation (as it appeared to observers) between Wehrmacht and Luftwaffe could have made greater operational control of the MKHL by the General Staff both more desirable to the VKF officers, and less alarming to Hungarian airmen.

The Polish armed forces in exile after 1939, including the Eagle Squadrons that contributed to victory in the Battle of Britain, owed their existence to the common Hungarian-Polish border established in the spring Ruthenian campaign, and to Hungarian obstinacy in keeping that border open in face of German pressure.<sup>106</sup> From 17 September, Hungary allowed Poles into Ruthenia to escape German and Soviet troops. Some 140,000 refugees, nearly all soldiers, entered Hungary in this manner, and by June 1940, over 100,000 had made their way to Britain and France to serve in western armies.<sup>107</sup>

Once Poland’s fate was sealed, Horthy, Teleki and Csáky tried to patch things up with Hitler. A war with Romania seemed ever more likely, and Budapest was eager for the resumption of German arms deliveries. The MKHL was especially keen to get its hands on the He-111 and Ju-87 bombers ordered earlier in the year. Both had performed very well in Poland, and they would fill a critical need in the Hungarian bomber force. The first examples arrived only in mid-1940.<sup>108</sup> The winter of 1939-40 was rife with rumours of

---

<sup>105</sup> K. Csukás, ‘Az önálló légiháború’, *MKSz* 3/1940, p. 706.

<sup>106</sup> J. Kasparek, ‘Poland’s 1938 Covert Operations in Ruthenia’, *East European Quarterly*, XXIII, No. 3 (Sep. 1989), p. 372.

<sup>107</sup> Macartney, *October Fifteenth*, I, p. 368. Gy. Juhász suggests the refugees numbered only half of Macartney’s claim.

<sup>108</sup> Szabó, *MKHL, 1938-1945*, p. 59.

Soviet plans to invade Bessarabia and German plans to occupy the Romanian oil fields. Neither occurred, but they kept Hungarian statesmen and the general staff busy contemplating different schemes to secure Hungary's flanks and achieve its revisionist objectives. Following the rout of France, the long-standing view among Hungarian conservatives that Britain would ultimately carry the day began to wane. Teleki felt that the matter of Transylvania should be settled before the war ended, and it looked as though the end could be in sight. So when the Soviet Union demanded in late June 1940 that Romania cede to it Bessarabia and Bukovina, the LHT ordered a general mobilisation, with the intention of insisting on the satisfaction of Hungary's claims.<sup>109</sup> After the 27 June mobilisation, the Lepság ordered forward deployment on 2 July, and by 6 July the movement was complete. On 9 July, the Aviation Brigade's chief of staff received the task order for attacks against Romania and the Soviet Union, but last-minute German intervention cancelled the strikes. On 12 July, the units received permission to send half of their enlisted personnel on leave, and three days after that, the deployed squadrons were ordered to return to their home bases.<sup>110</sup> The air force continued to operate and train near the frontiers, however, which gave a Romanian pilot the opportunity to repeat László Pongrácz's exploit. On 27 August, a Ca-135 returning to Debrecen after a training sortie was attacked by a Romanian He-112 (the RLM released twenty-four of the type to Bucharest, although only three pre-production models ever reached Hungary) and forced to land. The next day, Captain János Gyenes tried to avenge the attack by bombing the Szatmárnémeti airfield in a WM-21. This incident, Teleki wrote to Horthy, 'attested to the fliers' lack of discipline', and was 'extraordinarily awkward for the Hungarian government's promise to

---

<sup>109</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 172-3.

<sup>110</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 198.

keep the peace'. Horthy agreed that 'a single spark would have been enough for hostilities to flare up.'<sup>111</sup>

Hitler called Teleki and Csáky to Munich, where he warned them openly not to attack Romania. Instead, he promised to bring the Romanians to the bargaining table to settle the territorial dispute. Hitler took a renewed interest in resolving the Transylvanian problem after he decided to invade the Soviet Union. To execute such an attack, Germany needed Hungarian railways and Romanian oil, and it did not want to have to fight either country in order to get them. Therefore a negotiated settlement was in the German interest. After bilateral talks ended in frustration, Ribbentrop and Ciano again dictated the terms in Vienna. On 30 August they were announced. Hungary received 17,000 square miles of territory and 2.5 million inhabitants, of whom nearly a million were Romanian. Almost 400,000 ethnic Hungarians remained in Romania. In return for what Teleki viewed as a poor deal, Hungary granted special recognition to the *Volksbund*, gave Germany additional economic concessions, and promised to pass certain internal measures. Among those measures were the release of Arrow Cross leader Ferenc Szálasi and the introduction of a third anti-Jewish law. Hungary acceded to the Tripartite Pact, which recognised the dominance of Italy and Germany in Europe and of Japan in Asia. It also agreed to the transport of German troops across Hungary into Romania, a concession that expanded until the Hungarian railways were essentially a part of the German military transportation network.<sup>112</sup> These costs were not readily apparent to the Hungarian people (except those Jews directly affected), and they celebrated the Second Vienna Award as they had the First. Admiral Horthy led the parade into Nagyvárad on his charger to the delight of Magyar crowds, armoured trains were draped

---

<sup>111</sup> Quoted in Szabó, *MKHL, 1938-1945*, pp. 121-5.

<sup>112</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 172-6.

in flowers, and flights of MKHL aircraft turned overhead.<sup>113</sup> It was, according to *Magyar Szárnyak*, ‘the end of the Trianon captivity’.<sup>114</sup>

The mobilisation also signalled the end of the Hány era for the MKHL. The general staff had opposed air force independence from the beginning, and László Hány, with his loyal following of MKHL officers and ability to influence Horthy, personified that organisational autonomy. Hány had rightly pointed out to Horthy in 1938 the multitude of problems facing the air service, and had suggested to the Regent that airmen, if given the freedom, could solve them. That had not proved to be the case. Recruitment was still too low, aeroplanes too few, accident rates too high, and combat readiness too shaky. Hány and his staff had not caused any of these problems, to be sure, but neither had they corrected them as decisively as he had led the Regent to expect. The VKF seized on the MKHL’s shortcomings during the July mobilisation to undermine confidence in the organisation. Air units had arrived at their wartime bases quickly, but they were not prepared to execute the VKF’s plan to reduce Romanian fortresses.<sup>115</sup> The force was still plagued with technical troubles. The newly arrived Ca-135s could fly, but their bomb racks and bomb sights were faulty; the short range of the Ju-86s meant they could not reach their intended targets deep in Transylvania; and the CR-42s could not have escorted them that far in any case.<sup>116</sup> The MKHL therefore had no real offensive capability: the only bombers that could get to the VKF’s designated targets could not carry, or aim, bombs. In the days that followed this discouraging report, it also seemed that the MKHL had very little defensive capability, since one of its bombers was forced down inside the country, and was ill disciplined as well. With the prospects of the

---

<sup>113</sup> Photomontage, *Magyar Szárnyak* 3/9 (15 Sep. 1940), pp. 15-6.

<sup>114</sup> *Ibid.* p. 1.

<sup>115</sup> A. Bonhardt et al., *A Magyar Királyi Honvédség fegyverzete* (Budapest, 2002), p. 248.

<sup>116</sup> Szabó, *MKHL, 1938-1945*, p. 125.

MKHL appearing rather grim, the VKF offered a proposal to bring it back under the control of the army and general staff. The air force, it concluded, was ‘struggling with an internal crisis that showed its leaders could not handle independence.’<sup>117</sup> Chief of Staff Henrik Werth, originally a supporter of the autonomous air force, proposed to combine the MKHL with the air defence and civil defence functions under a re-instituted Defence Ministry Aviation Group. Horthy lost confidence in Hány, and on 24 December the Regent removed him from the Lepság. Waldemár Kenese, formerly the Inspector General, was brought out of retirement to head the MKHL.<sup>118</sup> Kenese acted straight away to reduce flying accidents—by stopping all training flights.<sup>119</sup> This had the immediate and obvious effect of lowering the loss rate, but it also substantially decreased the proficiency of MKHL pilots, a serious problem but one less apparent and easier to ignore.

As the year 1940 came to a close, Hungarian airmen had cause to worry for their service. In less than two years, it had gone from a clandestine branch of the army to an independent and modernising force, and had played a dramatic role in a national triumph. But its leaders had been over-zealous in promoting the new arm, and the MKHL’s failure to address satisfactorily a range of equipment, training, and operational errors had put independence at risk. Still, there was much to celebrate from a national perspective. Trianon had been overthrown. The Hungarian flag flew over the Felvidék and substantial parts of Transylvania. Czechoslovakia had been dissolved, Romania forced to cede some of its ill-gotten gain, and Yugoslavia neutralised through a treaty signed at year’s end. The revisionist goals were almost completely fulfilled. And the price paid for these successes seemed quite low. Casualties in the border skirmishes were minimal, and Hungary had come out far ahead

---

<sup>117</sup> Quoted in *ibid.* p. 96.

<sup>118</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 203; Szabó, *MKHL, 1938-1945*, p. 96.

<sup>119</sup> Bonhardt et al., *A Magyar Királyi Honvédség fegyverzete*, p. 248.

of its neighbours in each arbitration. The country had even maintained its honour by defying German requests for passage in its attack on Poland. This state of affairs was coming very quickly to an end. In the next few months, Hungary would violate its treaty with Yugoslavia, and embark on a disastrous war with the Soviet Union at Hitler's side. The Royal Hungarian Air Force, like the rest of the nation, would lose many times over. It would lose, first, its independence as an aerial arm to the Hungarian army, then its national character to the Luftwaffe, and finally, its very existence at the hands of the Allies.

## Chapter 7

## War: 1941-45

In 1941, Hungary would place itself firmly, and as it turned out, irrevocably and disastrously, in the Axis camp. Against the wishes of its prime minister, the Honvéd joined the German invasions of Yugoslavia and the Soviet Union. Participation in Hitler's campaigns was advocated by the General Staff and embraced by much of the officer corps, who believed in the harmony of German and Hungarian interests, and in the invincibility of German arms. Admiral Horthy recognised the divergence of interests, and believed the western Allies would prevail. But a combination of gratitude toward Germany for its support of Hungarian revisionism, hope for further territorial gains, fear of the consequences of non-participation, and hatred of communism led him to approve Hungary's involvement. The ruling class hoped that Hungary's upward trajectory would continue under Axis patronage. In fact, the country had reached its zenith. The period between the two Vienna Awards represented the apex of Hungary's post-Trianon experience. From 1941, its freedom and prosperity would be curtailed; slowly and almost imperceptibly in the beginning, dramatically and devastatingly at the end.

In many respects, the Royal Hungarian Air Force was also on the decline by 1941. Although the MKHL would achieve its maximum lethality and effectiveness later, flying German aeroplanes under the Luftwaffe's direction, the institution had already reached its peak of prestige and influence. The Hungarian air force of 1944 would be twice as large as the 1940 service in both men and machines, but by then its independence was substantially constrained, and Hungarian airmen had abandoned their expectation for the decisiveness of unrestricted air warfare. This diminution of the MKHL, in stature and ambition if not in size,

began with the 1941 re-organisation that found the air force once again under the control of an infantry general.

The Christmas 1940 replacement of Colonel László Hány by retired Lieutenant General Waldemár Kenese was only the opening gambit in the VKF's administrative war against the independent air force. On 15 January 1941, the Defence Ministry forwarded a General Staff paper entitled 'The unified air forces' guiding organisation, and its relation to the Honvédség's centralised transformational arrangement'. Behind the bureaucratic jargon was a proposal to strip the MKHL of its autonomy. Since 1 January 1939, the head of the LÜH and commander of the Lepság (Hány) had been subordinate only to the Minister of Defence, and the MKHL had been charged with 'operating independently and autonomously'.<sup>1</sup> The VKF proposed to create Land and Air Chief Departments (*Földi* and *Légügyi Főcsoporthőnökség*) subordinated to a new position of Deputy Defence Minister.<sup>2</sup> While this in theory would have maintained the air force as a branch equal to, but separate from the army, the reality was quite different. The *Légügyi Főcsoporthőnökség* would retain authority only for acquisition, while the VKF would exert administrative and operational control. With Hány out of the picture, and the ailing Kenese unable or unwilling to oppose the VKF, Horthy signed the order instituting this arrangement on 14 February 1941. General Sándor Győrffy-Bengyel, an infantry officer, was appointed Deputy Defence Minister. The head of the *Légügyi Főcsoporthőnökség* was András Littay, also, astonishingly, a general of infantry.<sup>3</sup> Kenese himself gave way to General Béla Rákosi, an air defence artillery officer, on 20 February. The VKF's victory over the MKHL was nearly complete. Not only had the General Staff asserted operational command for itself, it had also managed to interpose two

---

<sup>1</sup> See above, p. 217.

<sup>2</sup> Szabó, *MKHL, 1938-1945*, p. 96.

<sup>3</sup> Veszényi, 'A magyar katonai repülés', pp. V/16, 50.

infantry officers between the senior Hungarian airman and the Defence Minister. Further personnel changes remained before the ‘spring cleaning’ was finished. Three MKHL officers were removed from positions on the air staff, and Colonel Rezső Laborczfy was relieved as commander of the 1st Aviation Brigade. Meanwhile, an infantry colonel was appointed as Rákosi’s deputy. In a move perhaps intended to end Hungarian Douhetism, Ferenc Szentnémedy was moved from his position as Chief of the Air Staff to be a department head within the Légügyi Főcsoportfőnökség. Colonel Géza Vörös, who had sparred with Szentnémedy in the pages of *Magyar Katonai Szemle* in 1932 and was most recently the chief of staff for the 2nd Infantry Division, became the Chief of the Air Staff. These sweeping changes were characterised, not implausibly, by one historian who experienced it, as a ‘purge’ (*tisztogatás*).<sup>4</sup>

The MKHL seems to have been the only European air service to have been re-subjugated to land forces’ control. Some air arms, such as the Royal Air Force, Armée de l’Air, Regia Aeronautica, and Luftwaffe, were organisationally independent, while others, as in Poland, had an air inspectorate with no staff or acquisition authority.<sup>5</sup> But the trend was always toward greater autonomy for the air forces. Why did the Hungarian air force alone lose its independence? The VKF’s answer was straightforward: the MKHL staff was not capable of managing its own affairs satisfactorily. ‘The fact is,’ read one VKF document, ‘that the Air Force’s two years of independence did not bring the expected outcome...they did not have the necessary organisation or material.’<sup>6</sup> In fact, the outcome was precisely what the VKF expected, and indeed, what it wanted. The General Staff had strongly opposed

---

<sup>4</sup> Ibid. pp. V/48-51. János Veszteényi was a wartime MKHL pilot.

<sup>5</sup> Poland: M.A. Peszke, ‘Poland’s Military Aviation, September 1939: It Never Had a Chance’, in Higham and Harris (eds.), *Why Air Forces Fail*, p. 20.

<sup>6</sup> Cited in Veszteényi, ‘A magyar katonai repülés’, p. V/19.

the creation of the independent air force in 1938, and had worked to undermine its autonomy since that time. It is not possible to determine how much of its opposition was based on a clear-eyed assessment of military effectiveness, and how much was merely defence of its bureaucratic prerogatives. The extent of the 1941 staff purge suggests the second rationale predominated. Even so, Hungarian airmen and senior defence leaders, including Horthy as Supreme War Lord, must bear most of the blame for the MKHL's organisational failure.

The airmen did not appreciate the degree to which their administrative muscles had atrophied in the two decades of secrecy. Just as István Petróczy had in 1923 underestimated the effect of the production ban on Hungarian aeroplane manufacturers, Hány and his supporters misjudged the difficulty of simultaneously enlarging, modernising, and employing an air force. Hány correctly identified most of the air service's problems in his report to Horthy, and he convinced the Regent that the solution was a unified service under an airman's command. When the problems persisted, Horthy's confidence in Hány wavered, as did his earlier conviction that only 'aviation experts' could lead the air force. The Regent did not lose faith in the air force as an operational tool of warfare, nor did he flag in his efforts to increase the MKHL's size and capability. But neither he nor Defence Minister Bartha defended the autonomy of the air force against the general staff's effort to re-assert control over the MKHL. A more measured and less disruptive approach might have entailed replacing Hány with a more capable administrator and sprinkling experienced VKF officers throughout the MKHL to bring more coherence to the organisation.

The Defence Ministry was not the only organ of Hungarian life facing chaos and intrigue early in 1941. For the Foreign Ministry, at least, most of the disorder was outside its walls. There was a new Foreign Minister: László Bárdossy, minister to Bucharest, was selected to

replace Csáky after the latter died in January. Bárdossy had no natural affinity for Germany, but he believed Great Britain's relationship with the Little Entente to be inviolable, and he therefore did not share Count Teleki's faith that Hungary could reach an agreeable deal with London.<sup>7</sup> The newest article of Teleki's faith was the December 1940 Treaty of Eternal Friendship with Yugoslavia, a pact which he sought in part as a gesture of good will to the British. Ribbentrop approved, seeing the treaty as a way to coerce Belgrade into joining the Tripartite Pact. Teleki had also accepted a Soviet invitation to discuss a non-aggression treaty. Those talks led to a trade agreement and, as a goodwill gesture, the Soviets returned Hungarian battle flags seized by the Tsar's armies in 1849. When Admiral Horthy got wind of the negotiations, he ordered them stopped, just as he had in 1925. Horthy did approve a plan in January to establish an émigré government in the event of a German occupation of Hungary. Count Bethlen would head the government in London, and Tibor Eckhardt would be its representative in the United States.<sup>8</sup>

On 25 March 1941, Yugoslavia caved in to German pressure and signed the Tripartite Pact. The following day a military coup overthrew the Cvetković government. The Yugoslav air force general Dušan Simović took his place as premier.<sup>9</sup> Hitler expanded his plan for the invasion of Greece to cover Yugoslavia as well. For this he counted on Hungarian cooperation, and dangled the prospect of territorial gain in front of the Regent. Horthy responded gratefully, assuring Hitler that he felt himself 'wholly and completely in unity with Germany'. Horthy suggested that the new Yugoslav government must be under the influence of the Soviets, and that fact might provide a pretext to escape the terms of the

---

<sup>7</sup> Macartney, *October Fifteenth*, I, p. 466.

<sup>8</sup> Gy. Juhász, *Hungarian Foreign Policy*, pp. 181-3. Eckhardt made it to America later that year, but Bethlen never departed for London. He died in a Soviet prison camp.

<sup>9</sup> Horthy, *Memoirs*, p. 182.

December treaty.<sup>10</sup> The General Staffs immediately began consultations. Horthy briefed the Council of Ministers on 28 March, and Teleki registered concern over the matter. Bárdossy tried to gauge possible reactions in London and Washington. On 1 April, the LHT approved joining the German attack. Teleki offered the LHT three suitable legal rationales for Hungarian intervention: the requirement to stop anti-Magyar depredations; the disintegration of the Yugoslav state; or the breakdown of governance in territories claimed by Hungary. Reliable reports from the frontiers indicated that none of those conditions was being met. On 2 April came word from György Barcza, minister in London, that Britain would sever relations with Hungary if a German invasion were launched from its territory, and would declare war if Hungarian forces participated. Teleki received the telegram around 9 p.m., and was deeply distressed. His entire foreign policy had rested on the notion that Great Britain would understand Hungary's impossible situation, and indulge it until Budapest could extricate itself from Germany's grasp. This proved that his hope was an illusion. Sometime in the early morning of 3 April, Teleki shot himself.<sup>11</sup> He left a letter addressed to the Regent in which he reminded Horthy that the Yugoslav treaty had its origins in the Regent's 1926 speech at Mohács.<sup>12</sup> Furthermore, Teleki wrote, 'not a word about the trumped up atrocities is true. Not against the Hungarians, and not even against the Germans! We will become corpse robbers! The most foul people. I did not restrain you. I am guilty.'<sup>13</sup> Winston Churchill later wrote that Teleki's 'suicide was a sacrifice to absolve himself and his people from guilt in the German attack on Yugoslavia'.<sup>14</sup> Perhaps so, but it made no discernible difference to Hungarian policy. When Britain's minister to Budapest, Owen

---

<sup>10</sup> *Horthy Miklós titkos iratai*, M. Szinai and L. Szücs (eds.), (Budapest, 1965), pp. 289-91.

<sup>11</sup> Macartney, *October Fifteenth*, I, pp. 487-90.

<sup>12</sup> See p. 107.

<sup>13</sup> *Horthy Miklós titkos iratai*, p. 292.

<sup>14</sup> Quoted in Cartledge, *Will to Survive*, p. 381.

O'Malley, called on Horthy to convey his condolences, Horthy informed him of Hungary's intention to reclaim the Délvidék (southern Hungary).<sup>15</sup>

General Werth ordered mobilisation on 4 April, the same day that German troops began flowing into Hungary. The MKHL's 1st Aviation Brigade was included in the order, as were all anti-aircraft artillery elements of General Gorondy-Novák's Third Army. Six Hungarian fighter squadrons were sent to Kecskemét, Pécs and Szeged, and three bomber squadrons to Hajdúböszörmény and Székesfehérvár.<sup>16</sup> The fighter squadrons flew exclusively Italian aeroplanes (two units retained their CR-32s; four had received the newer CR-42s), while the bombers were a near-even mix of Ca-135s and Ju-86s.<sup>17</sup> Since squadron strength had been standardised by this time at nine primary aeroplanes with three unit spares, the MKHL's mobilised striking force amounted to a hundred machines. This was dwarfed by the German air contingent, which numbered over a thousand aeroplanes, to which were added almost seven hundred aircraft from the RA. Against the combined Axis forces, the JKR V (*Jugoslovensko Kraljevsko Ratno Vazduhoplovstvo*) was at an insurmountable disadvantage in quantity and quality. Only half of its 985 aircraft were front-line machines, and just 60 per cent of these were modern designs. With a small number of Hawker Hurricanes and Bf-109s, the JKR V would have outmatched the MKHL on its own, but the Yugoslavs posed no real threat to a German-Italian-Hungarian fleet of over 2,000 aeroplanes.<sup>18</sup>

German forces invaded Yugoslavia on 6 April, while the Honvédség was still recalling personnel and preparing units for deployment. The war immediately made itself felt in Hungary. Yugoslav artillery shells fell inside the border, Luftwaffe fighters departed from

---

<sup>15</sup> Ibid., and Gy. Juhász, *Hungarian Foreign Policy*, pp. 185-6.

<sup>16</sup> Szabó, *MKHL, 1938-1945*, p. 129.

<sup>17</sup> Niehorster, *Royal Hungarian Army*, p. 170.

<sup>18</sup> L. Olasz, 'Jugoszláv légitámadások Magyarország ellen 1941 áprilisában', *HK* 117/1 (Mar. 2004), pp. 169-71.

southern Hungarian bases, and German bombers made forced landings inside the country. On the morning of 6 April, Yugoslav observation aeroplanes patrolled the frontier. In the afternoon, the JKRV ordered a Blenheim from the 62nd Bomber Group on a long-range reconnaissance mission to the north. Hungarian air-defence observers spotted the aircraft as it approached Csepel Island, and initiated Budapest's first actual air raid alert since the First World War. A flight of CR-42s from 1/3 Fighter Squadron scrambled to intercept the Yugoslav bomber, but could not reach its altitude before the Blenheim retreated south. Hungarian air defence officials subsequently put the entire country on a state of high alert against aerial attack. Belgrade had already suffered significant damage from five waves of Luftwaffe attacks, and the JKRV lost over a hundred aeroplanes to enemy action on the first day.<sup>19</sup>

The Yugoslav air force conducted its first raids against Hungarian targets on 7 July. Two unescorted Blenheims showed up with no warning (the air raid sirens sounded only as the first bombs hit) over Pécs at 10.30. Six bombs struck the airfield, causing significant damage and wounding some German soldiers and Hungarian civilians. An hour later, another pair of Blenheims attacked Pécs. This time the defence was ready, and both JKRV aeroplanes were destroyed—one by Hungarian AAA, the other by a Luftwaffe Bf-109. Around the same time, a larger force of eight Blenheims was approaching the Szeged airfield. The leading aircraft, carrying the squadron commander, fell to a German fighter, but the rest proceeded to Szeged. The aircraft were spotted from the ground, but were mistaken for returning Bf-110s, and so no alarm was raised. Bombs fell around the Szeged train station, and a railway bridge was damaged, but at the cost of another Blenheim shot down by Hungarian anti-aircraft gunners. The next four days followed a similar pattern. Weak

---

<sup>19</sup> Ibid. pp. 181-3.

JKRV attacks caused light damage, but resulted in continuing attrition of Yugoslav aircraft to German pilots and Honvéd AAA batteries. Ten of the forty-five Yugoslavian combat losses occurred over Hungary.<sup>20</sup> In addition, one Magyar pilot of the JKRV defected to Hungary, landing his undamaged Blenheim at Érd.<sup>21</sup> MKHL fighters made few forays during the first few days of the conflict, in part because they were still mobilising, but also because the overwhelming superiority of the Luftwaffe rendered them temporarily superfluous.

The Honvédség began offensive operations only on 11 April, when its mobilisation was nearly complete and after the declaration of an independent Croatia offered a suitable justification. MKHL fighter squadrons provided air defence and conducted low-level strafing attacks in support of the Third Army, which was advancing quickly against light resistance in the wake of the Wehrmacht. Honvéd casualties were low: only sixty-five Hungarian soldiers were killed in the operation.<sup>22</sup> Hungarian bomber pilots had no opportunity to redeem themselves after the Igló fiasco, as they were used primarily to drop leaflets encouraging cooperation with the Hungarian military administrators following the Honvéd into occupied areas. Although no MKHL aircraft were destroyed by enemy action, six (two CR-32s, two CR-42s, one WM-21, and one SM-75) were written off due to accidents.<sup>23</sup>

The last of these was a catastrophe for the fledgling Hungarian airborne infantry. In the morning of 12 July, a Ju-86 from the Aviation Research Institute on a reconnaissance flight discovered an intact bridge spanning the Francis Joseph Canal. The HFP decided to seize the

---

<sup>20</sup> Ibid. pp. 183-97.

<sup>21</sup> P. Pagáts, 'Légítámadás Pécs és Siklós ellen', *Aero Historia* (Aug. 1991), p. 11.

<sup>22</sup> Macartney, *October Fifteenth*, II, p. 12.

<sup>23</sup> Olasz, 'Jugoszláv légítámadások Magyarország ellen', p. 197.

bridge with paratroops before Yugoslavian forces could escape across it. Vitéz Major Árpád Bertalan's 1st Parachute Battalion received its orders around 16.00, and soon loaded its assault force in four Savoia-Marchetti SM-75 transport aeroplanes.<sup>24</sup> (Five twenty-four passenger SM-75s had been purchased from Italy in 1938, but the installation of the WM-14 engines had not gone smoothly, and MALERT rejected the type for commercial flights. The aeroplanes were retrofitted by Manfréd Weiss for paradrop and air ambulance operations.)<sup>25</sup> The lead aircraft of the 1st Paratroop Transport Squadron (*Ejtőernyős Szállító Század*) took off from Veszprém at 17.40, piloted by the squadron commander, Captain Károly Kelemen. After climbing to two hundred feet, the SM-75 lost speed, nosed over, and crashed. Twenty people were killed, including Major Bertalan, Captain Kelemen and his crew, and fifteen paratroopers. Investigators laid the blame on a hydraulic elevator trim malfunction.<sup>26</sup>

Lieutenant Zoltan Kiss assumed command of the battalion and after some delay, the remaining three SM-75s departed Veszprém at 18.50 with sixty soldiers on board. Bertalan had not fully briefed Kiss on the assignment, however, and the only mission map had been burned in E-101. In the confusion following the crash, the paratroopers were dropped fifteen miles from the Szenttamás bridge, and arrived there only the following day, transported by the 4th Motorised Battalion.<sup>27</sup> News of the disaster was withheld from the public for two weeks, when acknowledgement came in the form of a death announcement in *Magyar Szárnyak*.<sup>28</sup> Major Bertalan had created the Hungarian parachute battalion, and his paratroopers 'loved him to the point of idolatry'. The battalion survived his death, but

---

<sup>24</sup> A. Kelemen, 'A bombázó iskolától az 1. önálló távol felderítő századig', *Magyar Szárnyak* (1981), pp. 58-9.

<sup>25</sup> Bonhardt et al., *A Magyar Királyi Honvédség fegyverzete*, p. 304.

<sup>26</sup> Szabó, *MKHL, 1938-1945*, p. 132. Károly Kelemen was the older brother of the Ju-86 pilot whose reconnaissance report initiated the paradrop mission.

<sup>27</sup> Veszteányi, 'A magyar katonai repülés', pp. V/140-2.

<sup>28</sup> Szabó, *MKHL, 1938-1945*, p. 132.

Hungarian airborne infantry withered in his absence. The planned expansion to a regiment never occurred, and the highly motivated and skilled paratroopers were never used in a major airborne operation.<sup>29</sup>

Even with no combat losses and no major operational errors to match the Igló bombing, for the MKHL the Yugoslavian invasion was somewhat dispiriting. There had been little improvement since the previous autumn's mobilisation against Romania. Major János Németh, the 1st Aviation Brigade chief of staff, pointed out in the after-action report submitted to General Werth that the VKF needed to give the air force more time to get its units ready for employment, particularly in the spring and fall, when unexpected weather could halt aircraft movements. The report highlighted other shortcomings, such as the poor performance of the ground-based air raid observers and the lack of suitable maps. It also reminded Werth of the problems with the ageing CR-32s. On the other hand, according to Németh, Third Army headquarters were very pleased with the level of air support it received: 'The Aviation Brigade's frictionless and fast employment (chiefly in the low-level attack role)—which demands close familiarity with, and quick integration into, the ground situation—would have been unimaginable if there had been two commands instead of one.'<sup>30</sup> This validation of the MKHL's subordination must have been very pleasing to Werth and the VKF.

Debate about the air force structure continued through April and May 1941. A Lepság paper that made its way to Werth blamed the new arrangement for the 'current chaotic situation' within the air force, and suggested that the only cure was a 'new, healthy

---

<sup>29</sup> Veszteányi, 'A magyar katonai repülés', p. V/142.

<sup>30</sup> Szabó, *MKHL, 1938-1945*, p. 133.

organisation'.<sup>31</sup> Colonel Géza Vörös, the new Chief of the Air Staff, did not agree with that position, but nevertheless argued the need for unity of air force command. A single agency should be responsible for all aspects of military aviation, he wrote, although he did not insist, as had Hány and Szentnémedy, that the force should have complete operational independence. According to Vörös, the MKHL's earlier problems could be traced to a shortage of resources. A larger and better-trained air staff would provide the necessary oversight of air force training and employment. By the end of May, Werth, aware that an expansion of the German war was imminent and fearing that any more tinkering would only weaken the air force, shut down any further discussion of the topic. He collected the various proposals and scrawled on top of the document stack, 'The current organisation stays!'<sup>32</sup>

That organisation had been fairly stable at the group level and below. The loss of air force independence in March had little effect on the flying squadrons, even if it had induced turbulence in the staff and senior commands. In May 1941, the MKHL comprised 8,500 personnel and 536 aircraft of all types.<sup>33</sup> The 390 combat aeroplanes were arranged in thirty-one squadrons: ten bomber, eight fighter, ten short-range and two long-range reconnaissance, and a single parachute transport unit. With only seventy-one Ju-86s and Ca-135s available (roughly even in numbers due to new Caproni arrivals and Junkers attrition), the ten bomber squadrons were well under their programmed size of twelve aeroplanes per unit. The short-range reconnaissance squadrons had sufficient numbers of aircraft, although the fleet was widely varied. Its single most numerous type was the WM-21, followed by the He-46 and Ro-37. The fighter force was similarly mixed. Fiat CR-32s and -42s made up the

---

<sup>31</sup> Quoted in *ibid.* p. 99.

<sup>32</sup> Quoted in *ibid.* p. 101.

<sup>33</sup> *Ibid.* p. 94, and H.W. Neulen, *In the Skies of Europe: Air forces allied to the Luftwaffe 1939-1945*, trans. A. Vanags-Baginskis (Norfolk, 2005), p. 122.

majority of the 174 fighter aircraft in the operational and training squadrons, but there was also a new Italian addition, the Reggiane Re-2000.<sup>34</sup>

The Re-2000 'Falco' was not in the first rank of European fighter aircraft in 1941, but it was a significant improvement over the Fiat biplanes. The Falco was an all-metal, low-wing monoplane with an enclosed cockpit and retractable gear, and was powered by a 14-cylinder Piaggio engine that was nearly identical to the WM-14. Reggiane, a Caproni subsidiary, had delivered forty-five of its contracted seventy Re-2000s to the MKHL by the end of May 1941. Hungary also purchased the production licence, and MÁVAG ultimately manufactured 185 'Héja' (Goshawk) aircraft from October 1942 to October 1944.<sup>35</sup> It was the MKHL's primary fighter in 1942.

On 31 May, the day after he squashed the air force organisation debates, Henrik Werth sent Prime Minister Bárdossy a memorandum outlining the various security, diplomatic and economic rationales for joining the coming German invasion of the Soviet Union. It was his second letter to Bárdossy on the matter, and Werth was eager to 'take up contact with the appropriate German military authorities, through military channels, with the object of preparing German-Hungarian military cooperation.'<sup>36</sup> Werth, pro-German by background, training and outlook, was certain that the Soviet Union would be defeated within weeks, and he feared that if Hungary abstained, it risked losing its territorial gains to Slovakia and Romania, both of which were committed to the offensive. Bárdossy rejected Werth's arguments, and bitterly resented his interference in political matters.<sup>37</sup> Werth continued his

---

<sup>34</sup> Neulen, *In the Skies of Europe*, p. 122.

<sup>35</sup> L. Kováts, *Sölymok, Héják, Nebulók: A Magyar Kir. Állami Vas-, Acél-, és Gépgyárak Repülőgépgyárának tevékenysége 1936-1944* (Budapest, 1990), pp. 57, 121.

<sup>36</sup> Quoted in Macartney, *October Fifteenth*, II, p. 18.

<sup>37</sup> As had Teleki before him, who submitted a resignation letter to Horthy in Sep. 1940 in part to protest Werth's meddling. See *Confidential Papers of Admiral Horthy*, pp. 133-48.

consultations with the German General Staff, whose chief, Franz Halder, wanted to include Hungarian forces in the invasion in spite of Hitler's instructions to the contrary. Hitler considered the Hungarians unreliable troops who had no reason to join the invasion; Halder knew Army Group South's divisions were matched in number by Red Army divisions, and he craved Romanian, Hungarian, Finnish and Slovak participation.<sup>38</sup> On 14 June, Werth sent Bárdossy yet another memo. Germany was certain to attack in the next ten days, Werth wrote, and he requested a general mobilisation. Bárdossy called a meeting of the Ministerial Council, which resolved unanimously to refrain from offering Hungarian participation in an invasion, while at the same time doing nothing to hinder Germany's own action. The council authorised mobilisation of VIII Corps at Kassa and the frontier brigades, but did not approve a wider call to the colours.<sup>39</sup>

Operation Barbarossa, to that time the largest military operation in history, commenced at 03.15 on 22 June with a massive artillery bombardment followed by armoured thrusts and air strikes.<sup>40</sup> The German minister in Budapest, Otto von Erdmannsdorf, delivered Horthy a letter from Hitler which asked only that Hungary secure its frontiers. The Council of Ministers decided to sever diplomatic relations with Moscow in symbolic solidarity with Berlin. Molotov took the news well, and reminded Hungarian ambassador József Kristóffy that the Soviet Union had no claims on Hungary, that it was neutral in Hungary's territorial disputes with Romania, and that the two countries' commercial relations were improving. Kristóffy relayed Molotov's message to Bárdossy by telegram on 24 June. Bárdossy also received on the 24th an unofficial request from the German General Staff, via Werth, that Hungary volunteer troops for Barbarossa. 'It is essential now that the Hungarian military

---

<sup>38</sup> D. Stahel, *Operation Barbarossa and Germany's Defeat in the East* (Cambridge, 2009), pp. 81-2.

<sup>39</sup> Macartney, *October Fifteenth*, II, pp. 18-20.

<sup>40</sup> Stahel, *Operation Barbarossa*, p. 153.

authorities should bring the political leaders in motion,' Halder told his liaison officer, 'that these should volunteer by themselves. Germany does not make demands, for which she would be compelled to pay, but she is grateful for any help, especially if given by motorised troops.'<sup>41</sup> The Ministerial Council declined to take Halder's bait, and reaffirmed its 14 June position. During the meeting, the Prime Minister publicly railed against another intrusion of the VKF into political matters. Bárdossy informed Erdmannsdorf of the Council's decision on 25 June, emphasising that a declaration of war was a matter for the government and the Regent.<sup>42</sup> Bárdossy's moral courage lasted another thirty hours.

Just after 13.00 on 26 June, three twin-engine aircraft circled over Kassa for a couple of minutes before dropping twenty-nine bombs on the city centre. Thirty-two people were killed and sixty seriously wounded, and there was much material damage.<sup>43</sup> At almost the same time, a lone fighter strafed a passenger train near Rahó. The VKF received a report of the event, and Bartha and Werth immediately informed Horthy that 'Soviet aircraft had bombed Kassa'. Bárdossy also went to see the Regent, and found him outraged. Horthy demanded the MKHL take revenge. Bárdossy convened the Council at 14.30—one hour and twenty minutes after the attack. In that time, Bárdossy 'made up his mind to a complete reversal of his whole policy': Hungary should enter the war now, on its own terms.<sup>44</sup> The VKF had long agitated for it, and the Regent was demanding a reprisal for Kassa. Even the thought that the bombing could be a German provocation did not sway Bárdossy from his new course, because in his estimation, such an act simply underscored Germany's determination to have Hungary in the war. Bárdossy announced the Soviet attack, declined

---

<sup>41</sup> Quoted in Gy. Juhász, *Hungarian Foreign Policy*, pp. 189.

<sup>42</sup> Macartney, *October Fifteenth*, II, p. 25.

<sup>43</sup> J. Borsányi, 'A 1941 június 26-ai kassai bombatámadás "fehér foltjai"', *HK* 104/2 (June 1991), p. 90.

<sup>44</sup> Macartney, *October Fifteenth*, II, p. 26.

to mention Kristóffy's message from Molotov, and polled the Council. All favoured retaliation, and only Interior Minister Keresztes-Fischer argued for restraint. The Prime Minister summarised his points, took silence for assent, and dismissed the Council. He then drafted a statement acknowledging that a state of war existed between the Soviet Union and Hungary, and ordered the MKHL to raid the USSR the next day.<sup>45</sup>

The identity of the Kassa bombers was in dispute on 26 June 1941, and remains a mystery. Bartha and Werth told Horthy they were Soviet aircraft, and Bárdossy told the Council the same thing. A report to the National Air Defence Command (*Országos Légyédelmi Parancsnokság*, OLP) around 15.30, however, called them 'unknown'.<sup>46</sup> Bárdossy himself was apparently not convinced the attackers were Soviets, but it did not alter his conviction that Hungary had to enter the war. 'Since the General Staff, which is obviously in agreement with the Germans,' he told the chief of the press bureau, 'says they were Russian, and since the Regent believes it—*basta!*'<sup>47</sup> Late the following morning, the VFK released a communiqué that tried to reconcile the Soviet line with the German rumour. The bulletin was titled, 'Soviet aeroplanes attack Kassa' and read in part:

Lieutenant Colonel Csejtey, the Kassa area air defence commander, Captain Krudy, and Lieutenant Csirke agreed on the following report:

Because of adverse weather, the insignia of the attacking aircraft could not be recognised, but in spite of that, a yellow stripe similar to that worn by Hungarian and allied aeroplanes could be seen. The insignia probably were painted over. Concerning the aircraft type, Lieutenant Csirke reported they had 2-3 engines and strongly swept-back wings, and were in general similar to a Ju-52. In contrast to this, Captain Krudy reported that the attacking aeroplanes bore a resemblance to our own Savoia heavy bombers.<sup>48</sup>

---

<sup>45</sup> Ibid. pp. 27-9.

<sup>46</sup> Szabó, *MKHL, 1938-1945*, p. 140.

<sup>47</sup> Quoted in Macartney, *October Fifteenth*, II, p. 29.

<sup>48</sup> Document reproduced in Borsányi, 'A 1941 június 26-ai kassai bombatámadás', p. 95. It is unclear if Krudy meant SM-75 transports, or Ca-135 bombers, but there were no Savoia bombers in Hungarian service. Neither had a swept leading edge like a Ju-52.

This dispatch shows that the VKF was aware of the confusion over identification of the bombers, but otherwise is not very helpful. Csejtey first reported ‘unknown’ aircraft, but he later recalled that he saw Soviet markings on the planes. Krudy’s recollection also changed, as he later claimed the bombers looked like twin-engine Heinkels. Csirke denied making any report on the matter at all.<sup>49</sup>

The simplest explanation for the Kassa bombing is that it was the result of a Soviet error. But the presence of the yellow stripes points to Axis aircraft, which has given rise to many conspiracy theories. The most widely accepted holds that the bombing was a German provocation intended to get Hungary to enter the war. This theory appealed to surviving Hungarian leaders and Communist historians, since it promised to absolve both Horthy and Stalin.<sup>50</sup> The theory relies on two premises: that the Soviet Union had no interest in attacking a Hungary whose neutrality it desired, and that the yellow stripes proved that German bombers executed the attack. The first of these is compelling, if not conclusive; the second is somewhat problematic. Molotov’s conversation with Kristóffy indicated that Moscow hoped to keep Budapest out of the war as long as possible, which makes a deliberate decision to bomb a Hungarian city inexplicable. The lack of motive does not rule out a misjudged order from a low-level Red Air Force commander, or, even more probable, a simple mistake by a poorly trained aircrew. Soviet air forces did conduct raids against Germany’s ally Romania on 26 June, and a small-scale attack against one of its other allies—Slovakia—would not have been an unreasonable use of a flight of bombers.<sup>51</sup> Soviet

---

<sup>49</sup> Ibid. p. 96.

<sup>50</sup> T. Sakmyster, ‘The Search for a Casus Belli and the Origins of the Kassa Bombing,’ *Hungarian Studies Review* Vol. X, No. 1 (Spring, 1983), p. 55.

<sup>51</sup> N.F. Dreisziger, ‘New Twist to an Old Riddle: The Bombing of Kassa (Kosice), June 26, 1941’, *The Journal of Modern History* Vol. 44 No. 2 (June, 1972), p. 242.

sources seem to show such attacks were considered on 25 June, and captured Soviet maps did not reflect the 1938 change in the border as a result of the First Vienna Award, which means that Red Air force planners and crews may well have thought Kassa a Slovak town.<sup>52</sup> Against this notion stand the claims of Ádám Krudy, who testified in Bárdossy's trial that he informed the Prime Minister on the day of the attack the aeroplanes were German. Krudy, who is often identified as a colonel and the commander of the Kassa airfield, was actually at the time a captain flight instructor at the Horthy Aviation Academy, the only MKHL facility in Kassa's immediate area.<sup>53</sup> His testimony that he could positively identify the aircraft on the basis of their yellow markings is almost certainly not true. Other accounts agree that the bombers attacked between 3,000 and 6,000 feet. The academy's weather report for 26 June indicated that visibility above 3,000 feet was poor due to humidity.<sup>54</sup> That would have made the yellow stripes very difficult to discern and, if the summer heat had by 13.00 burned away the fog, the aircraft would have appeared as silhouettes against a mid-day summer sky. The stripes might have been visible if the aeroplanes had been lower than witnesses estimated, but even that identification is less than conclusive. Paint is easily applied and recovered. Soviet squadrons could have hurriedly applied such markings in an attempt to avoid enemy fighters and ground fire. The war diary of Major István Mocsáry, the commander of the 4th Bomb Group, records seeing yellow stripes on Soviet aircraft.<sup>55</sup> Krudy also claimed at other times to have identified the bombers from the air as flying in a distinctly German formation, after he took off from the academy airfield and chased them down. This is also extremely unlikely, since the only aircraft on the field were Bücker Bü-

---

<sup>52</sup> J. Ormay, 'Még egyszer a Kassai bombázásról', *HK* 105/3 (Sep. 1992), p. 132.

<sup>53</sup> Dreisziger, 'New Twist to an Old Riddle', p. 238; Kistelegdi, 'A repülő akadémia története', p. 185.

<sup>54</sup> Veszényi, 'A magyar katonai repülés', p. V/252.

<sup>55</sup> J. Ormay, 'Még egyszer a Kassai bombázásról', p. 132.

131 and Arado Ar-96 trainers, which were not capable of overtaking bombers several thousand feet high.<sup>56</sup> Besides these flaws, this story of German provocation leaves the crucial question unanswered. Why would the Luftwaffe execute a treacherous attack against an allied country (a member of the Tripartite Pact, if not a combatant against the Soviets) without bothering to disguise its aircraft? Krudy's account of the event is not credible.<sup>57</sup>

The physical evidence that the weapons were of Soviet manufacture further undermines Krudy's story. One bomb did not detonate and was exhumed. Photographs confirm that it matched the size and shape of 100-kilogram Soviet devices then in use. In addition, remains of some bomb fuses and suspension straps bearing Cyrillic letters consistent with a Russian arms manufacturer were found in the debris.<sup>58</sup> Critics have argued variously that the Soviet equipment was planted, or that the pictures were re-touched, or that provocateurs dropped captured bombs from German aeroplanes. The effort required to pull off a conspiracy that would account for unexploded ordnance buried in a garden in Kassa, or to fake all of the photos that show the Russian origins of the bombs, exceeds other more credible explanations for the event. And József Ormay, a former MKHL Ca-135 pilot and student of the bombing, recalls his own unit making good use of captured Soviet bombs while German bombers left the vast stock untouched because of the incompatibility of the suspension equipment.<sup>59</sup> That the bombs landing in Kassa were of Soviet manufacture is all but incontrovertible.

---

<sup>56</sup> Pirity, 'Visszaemlékezés', HL Tgy 3.707, p. 150. Pirity also recounts a conversation with Krudy in Sep 1941 in which Krudy quizzed him about how Pirity, who had earlier fought Soviet bombers in the Finnish War, was able to identify them in flight.

<sup>57</sup> Dreisziger, 'New Twist to an Old Riddle', pp. 238-9.

<sup>58</sup> J. Ormay, 'Kassai bombák: Tárgyi bizonyítékok szemtanúk', *Magyar Szárnyak* (1982), pp. 86-89.

<sup>59</sup> *Ibid.* p. 90.

There are other theories. One, advanced by C.A. Macartney, is that the bombing was carried out by defecting Czech or Slovak pilots who dropped their bombs on Kassa before landing in the Soviet Union. *Pesti Hírlap* published a story in July 1942 of a Russian school master who told the Hungarian officer billeted in his house that his previous boarder had been a Czech pilot who told the Russian that he had led the Kassa attack.<sup>60</sup> The idea of Slovak revenge as a motivation cannot be discounted. In July 1941, after the Hungarians had joined the Axis assault on the Soviet Union, a Slovak fighter pilot deliberately attacked a 1/3 Fighter Squadron CR-42.<sup>61</sup> He failed to do significant damage to the Hungarian machine, but the incident shows the degree of antipathy that some Slovaks felt toward their Hungarian ‘allies’. Another proposition is that the bombers were Heinkels flown from a Romanian airbase, by Romanian crews, at the behest of the German General Staff. This theory takes as its basis the 1984 account of a 2/3 Fighter Squadron pilot whose flight was scrambled from its forward airfield at Bustyaháza, a Transylvanian town 100 miles southeast of Kassa. At around 14.00, the drone of engines could be heard from the northwest, and three CR-42s were ordered aloft. János Balogh was ready first and took off alone to meet the intruders. Balogh got within 1,500-2,000 feet from the bombers, which he described as ‘similar to He-111s’, and exchanged fire with them before they escaped into a cloud.<sup>62</sup> The well known Hungarian aviator Antal Bánhidi, who was also deployed in the east at this time as a reserve CR-42 pilot, cast doubt on Balogh’s story. He noted that Balogh’s flight leader, who attested to the 1984 statement except for the resemblance of the aeroplanes to He-111s, had twenty

---

<sup>60</sup> C.A. Macartney, ‘Hungary’s Declaration of War on the U.S.S.R in 1941’, in A.O. Sarkissian (ed.) *Studies in Diplomatic History and Historiography* (London, 1961), pp. 164-5; and *October Fifteenth, II*, p. 32.

<sup>61</sup> Stenge, ‘Baptism of Fire’, p. 100. The pilot was Ján Režnák, who became Slovakia’s highest scoring fighter pilot.

<sup>62</sup> J. Balogh, ‘Nyilatkozat az 1941.jún.26.-i Bustyaháza feletti légiincidensről’, HL Tgy 2.979, pp. 1-3.

years earlier reported seeing only two aircraft, and had not mentioned Balogh being fired upon. Bánhidi suggested that Balogh had come forward for notoriety after the publishing of a book on the event revived interest.<sup>63</sup>

The most believable of the conspiracy theories is put forward by T. Sakmyster, who lays the blame on Sztójay, Hungary's minister to Berlin, and Colonel Sándor Homlok, its military attaché. Sztójay's pro-German inclination was well established. Homlok shared his outlook and had been implicated in a number of clandestine military operations, including those of the Rongyos Gárda. Most interesting was his visit on 1 September 1938 to Colonel Hellmuth Groscurth, head of an Abwehr section. Groscurth recorded Homlok's statement in his diary: 'The Hungarian Chief of Staff requests the creation of a *casus belli* for an attack on Czechoslovakia by the dropping of Czech bombs on Hungarian territory by German aircraft after seizure of the first Czech airports.'<sup>64</sup> The incredible similarity between this suggestion and the Kassa bombing led Sakmyster to the conclusion that Homlok and Sztójay arranged the attack with the Abwehr, whose agents carried it out. That the operation existed only at the level of action officers in Berlin solves the problem of motivation, since neither Hitler nor Horthy would have known about it, and it explains the lack of documentation in Budapest. It also answers for the Soviet-made bombs, since Sakmyster suggests that captured Czech aircraft could have been used in the raid. This thesis requires four bombers, not the three almost universally reported, due to the limited bomb capacity of the available Czech bombers. The heaviest bomber and most likely candidate for this mission would have been the Tupolev SB-2, of which fifty-four were delivered to Czechoslovakia in early 1938. The SB-2 (produced under licence by Avia as the B-71) had a maximum capacity of six

---

<sup>63</sup> J. Ormay, 'A Bustyházi incidens', *Magyar Szárnyak* (1984), p. 72.

<sup>64</sup> Sakmyster, 'The Search for a Casus Belli', pp. 59-60.

100-kg bombs.<sup>65</sup> There were twenty-nine craters in Kassa, which could not have been caused by three SB-2s.

This writer, naturally sceptical of conspiracy theories and well experienced in the many ways aerial operations can be fouled up, favours the explanation of a Red Air Force targeting or navigational error. The Ilyushin Il-4 was a medium twin-engine Soviet bomber widely deployed at the time, and capable of carrying a load of 2,700 kilograms. Imagine a wayward flight of three Il-4s circling a large regional town above the haze while the flight leader consults his (outdated) map. The bombers have an unusual paint scheme, perhaps a squadron one-off, that is mistaken for the Axis stripe. The lead pilot correctly locates himself as being over the Slovakian city of Kassa, and decides to expend his flights' weapons on the centre of the enemy town. Such a scenario requires no conspiracy and no cover-up, simply a coincidence (paint scheme) and an error (navigation).

It is unlikely that the full truth about the Kassa bombing will ever come to light. Even if they did not engineer it, the event furthered the agenda of the German and Hungarian General Staffs, and no effort would have been expended by those organisations to uncover possibly uncomfortable facts. General Werth is reported to have said in July, 'For me, the Kassa bombing really was useful.'<sup>66</sup> The political realities then, along with the real necessities of the war, precluded the thorough investigation and reconciliation of conflicting reports that any such event produces. Political pressures did not diminish for long decades, during which time memories grew hazy. By now the documentary collections in central Europe have been thoroughly researched and have yielded no clear answers. Unless a

---

<sup>65</sup> J. Ormay, 'Milyen gépek bombázhatták és milyen gépek nem bombázhatták Kassat?', *Magyar Szárnyak* (1984), pp. 50-1.

<sup>66</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 141.

startling new fact emerges from a Russian archive, the bombing will probably remain a matter of contention and speculation.

The record of the next steps is clear. In the middle of the morning on 27 June, Prime Minister Bárdossy released a press statement and then addressed Parliament: ‘The Royal Hungarian Government concludes that in consequence of these attacks a state of war has come into being between Hungary and the Soviet Union.’ After being interrupted by cheers, Bárdossy continued, ‘Only one more sentence. The Hungarian Air Force will take the appropriate measures of reprisal.’<sup>67</sup> By the time he spoke, the retaliation raid was complete. Lieutenant Colonel Béla Orosz, 4th Bomber Regiment commander, had received a preparatory order at 16.45 on the 26th, putting his units on alert for action the following day. Approximately sixteen Ju-86s of 4/II Bomber Group at Veszprém were loaded overnight, and they took off at 03.00 for an intermediate stop at Debrecen.<sup>68</sup> They were joined by the crews of eight Ca-135s from 3/5 Bomber Squadron for a final mission briefing. The strike force departed Debrecen around 06.00 and met their escort of nine CR-42s from Aladár Szobránczy’s 2/3 Fighter Squadron near its base at Bustyaháza. From there they continued northeast, crossing the Carpathians en route to the target, the Ukrainian town of Stanislau. The air defence was heavy, and the fighters attempted to suppress Soviet AAA batteries while the bombers attacked the airfield and barracks.<sup>69</sup> Records of the VKF show that all of the nineteen participating bombers returned safely, but two CR-42s were shot down. Szobránczy’s pilots claimed one Soviet bomber and one fighter destroyed. The 7th and 10th Short-range Reconnaissance Squadrons also took part in the Stanislau raids, arriving soon

---

<sup>67</sup> Macartney, *October Fifteenth*, II, pp. 29-30.

<sup>68</sup> Szabó, *MKHL, 1938-1945*, pp. 140, 142; and J.R. Gaal, ‘Bombers at Large’, *Air Combat* Vol. 5 No. 6 (Nov. 1977), p. 83.

<sup>69</sup> Gaal, ‘Bombers at Large’, p. 83.

after the bombers and reporting heavy resistance, but no losses. At the end of the day, the VKF released the following statement: ‘This morning, the Hungarian Air Force executed very effective reprisal attacks (*igen eredményes megtorló támadásokat*) against military targets in Soviet Russia. After completing their successful attacks, our aircraft returned to their bases.’<sup>70</sup>

The bomber squadrons flew no missions the following day, using the time to complete maintenance and deployment tasks and prepare for an early-morning strike on the 29th. That mission followed the pattern of the Stanislau attack, but this time the target was a Soviet supply depot in Strij. Target identification was enhanced by photographs taken on 28 June by He-70s from the Long-range Reconnaissance Group. Twenty-five MKHL bombers (seventeen Ju-86s, eight Ca-135s) took off around 04.00, rendezvoused with their escorts from 2/3 Fighter Squadron, and proceeded to the target area. Strij was partially obscured by low clouds, so the bomber formation split up to prosecute their attacks as they were able.<sup>71</sup> Despite the chaos, the bombers scored hits on the train station and gas works, and the gunners from one Ju-86 recorded a confirmed kill, shooting down a Soviet fighter. One bomber suffered significant damage and made a forced landing.<sup>72</sup> After being re-fuelled and re-armed, the bombers struck out again in the afternoon, with orders to attack any targets of military significance except bridges, which the Wehrmacht intended to use on its march east. When Lieutenant István Szakonyi passed the bridge over the Pruth near Kolomea, however, he was shocked to see a mass of khaki uniforms on the east side. He decided these were Soviet troops about to invade Bukovina and, acting against orders, attacked the bridge. To his surprise, his first two bombs completely destroyed one span. Szakonyi returned to

---

<sup>70</sup> Veszteényi, ‘A magyar katonai repülés’, pp. V/255-6.

<sup>71</sup> Gaal, ‘Bombers at Large’, p. 84.

<sup>72</sup> Veszteényi, ‘A magyar katonai repülés’, p. V/257.

Debrecen and reported his action to Lieutenant Colonel Orosz, who advised him to prepare for a court-martial. During the night, Orosz received a telegram from Lepság advising that the Red Army had begun a counter-offensive, and bridges were no longer prohibited targets. There was no court-martial for Szakonyi.<sup>73</sup> Soviet air operations intensified on 29 June, and the MKHL lost a fighter and a WM-21 to enemy aircraft. Bad weather on 30 June limited the effectiveness of bombing and reconnaissance missions, which were in any case launched in small numbers without specifically briefed targets. For four days, the MKHL had conducted Hungary's only significant offensive operations, but beginning on 1 July, Honvédség ground units attacked, and the MKHL reverted to a support role. The reprisal raids were over, and, as the VKF's daily situation report phrased it, 'this concluded the period of air force strategic employment'.

The retaliation attacks against Stanislau and Strij can be considered an independent air campaign, and were directed from the top levels of government. But they bear little resemblance to strategic attack as envisioned by Douhet and championed by Szentnémedy. The 4th Bomber Regiment did not target civilians with the intention of breaking their national will and instigating widespread societal collapse, as demanded by the theory of the unrestricted aerial offensive. The MKHL was too small to achieve that, even in a single Ukrainian city. Instead, the Hungarian pilots attacked whatever suitable targets they could find in the briefed area, subject to the constraints of weather, enemy resistance, and their own proficiency. The air force carried the weight of Hungary's war effort for a few days while its land forces completed mobilisation, and it managed to strike a couple of minor blows while suffering very few casualties of its own. The performance of the bomber squadrons was far from perfect, but it was a major improvement over the embarrassment of

---

<sup>73</sup> Gaal, 'Bombers at Large', pp. 85-7.

the Igló raid—there were no errant strikes on Hungarian territory for instance. The June campaign could be considered a victory for air power pragmatism. From this point forward, however, the MKHL would conduct offensive operations only in support of Honvéd or Wehrmacht ground campaigns.

The Honvédség had been mobilising since 26 June, and by 30 June Lieutenant General Ferenc Szombathelyi's Carpathian Group, consisting of the Rapid Corps, the 1st Mountain Brigade, and 8th Frontier Brigade, was ready to attack. The Carpathian Group would advance northeast across the mountains with the German Seventeenth Army on its left flank and the Romanian Third Army on the right. The combined Axis force aimed to secure the Dniester River crossings.<sup>74</sup> The 1st Aviation Brigade was placed under Szombathelyi, whose order of the day on 1 July included his commander's intent: 'The available forces, with bomber force support, attack with weight from the area of Kőrösmező, reaching the line Kolomea-Stanislau as quickly as possible.'<sup>75</sup> MKHL units were tasked with battlefield interdiction missions within three miles either side of the rail line to Mikuliczin. Orosz's 4th Bomber Regiment led the attack with escorting CR-42s from 2/3 and 2/4 Fighter Squadrons. Short-range reconnaissance squadrons responded to the needs of their associated divisions, and the long-range reconnaissance units conducted missions assigned by the VKF.<sup>76</sup> The early days of July continued in this fashion.

In the meantime, MKHL units trickled east. The brigade headquarters moved to Huszt, a small airfield eighty miles northeast of Debrecen, and the 1/I Fighter Group (twenty-three CR-32s) deployed from Szolnok to Miskolc. The Red Army, on the other hand, rushed eastward, ahead of the advancing Axis formations. The pace of the MKHL's movement east

---

<sup>74</sup> Dombrády and Tóth, *A Magyar Királyi Honvédség*, pp. 195-6.

<sup>75</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 143.

<sup>76</sup> Vesztényi, 'A magyar katonai repülés', p. V/262.

was a source of frustration for Lieutenant Colonel Sándor Gyiresy, Hungary's liaison officer with the Luftwaffe's 4th Air Fleet. Gyiresy complained to the VKF: 'It is my impression that the Germans would appreciate it if our combat air forces would deploy across the Carpathians and participate in the pursuit of the enemy, in light of the fact that the 4th Air Fleet's range is 1,000 kilometres.'<sup>77</sup> On 5 July, 1st Aviation Brigade commander Colonel István Bánfalvy informed Gyiresy that the fighter and reconnaissance squadrons were moving forward, and the bomber units would follow in a few days. An additional fighter unit, the 1/3 'Ace of Hearts' squadron, was also being sent east. Both the need for the forward movement and the difficulties the moves caused are evident in the recollection of one 4/I Bomber Group pilot. It had become hard, he remembered, to find Soviet troop concentrations 'because they were retreating so fast away from us... There were days when we had to fly 100 kilometres forward, and we still could not find them. Another disadvantage was that the ground details could not keep up with us. We would move forward from one base to the next—no kitchen, no ground personnel—nothing.'<sup>78</sup> The race to cross the Dniester ended in disappointment on 6 July, when retreating Soviet troops destroyed the last of the remaining bridges. In the first ten days of the war, the MKHL flew 145 combat sorties and dropped 113,000 kilograms of bombs. Losses were few, but aircrews struggled with the unpredictable weather above the Carpathians, regularly encountering snow showers and icing conditions for which their Italian aeroplanes were ill equipped.<sup>79</sup>

During the pause at the Dniester, the Hungarian expeditionary force experienced a number of organisational changes, none of them large, but all having the effect of bringing

---

<sup>77</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 144.

<sup>78</sup> Quoted in L. Hangodi, 'A M. Kir. Honvéd 4/I-es Nehézbombázó-Osztály története, 1936-1945', *HK 116/1* (Mar. 2003), p. 158.

<sup>79</sup> Gy. Punka and Gy. Sárhidai, *Magyar sasok: A Magyar Királyi Honvéd Légierő 1920-1945* (Budapest, 2006), p. 39; and Szabó, *MKHL, 1938-1945*, p. 145.

them under closer German control. Werth agreed to split Szombathelyi's Carpathian Group. The Mountain and Frontier Brigades would remain west of the Dniester as occupation troops, while the 24,000 men of Lieutenant General József Németh's Rapid Corps would continue to advance with Army Group South.<sup>80</sup> To improve air force coordination with the Honvéd troops, the VKF dissolved the 4th Bomber Regiment and created in its place a temporary Rapid Corps Air Group, consisting of the 2/3 Fighter Squadron, 7th and 10th Short-range Reconnaissance Squadrons, air defence artillery batteries, two motorised sections, and a mobile field repair unit. Béla Orosz of the 4th Bomber Regiment took command of the group.<sup>81</sup> The bomber squadrons remained engaged, but they were under centralised control from Budapest. Their activities became increasingly restricted because of German concerns about the difficulty of identifying allied troops on the chaotic battlefield. Hungarian bombers were first confined to targets within the Rapid Corps' sector, but by the third week of July, they were being used only for long-range reconnaissance. These limitations frustrated Orosz, as did the Rapid Corps' inability to provide adequate supplies for the Group, but the VKF rejected his proposal for greater independence.<sup>82</sup> With their capabilities badly under-utilised and the aeroplanes in need of mechanical attention, Lepság withdrew the 4/1 and 4/3 Bomber Squadrons on 17 July. The 'mixed squadron' composed of six 3/II Ca-135s and nine 4/I Ju-86s remained, and was eventually placed under Orosz's group.<sup>83</sup>

Despite the administrative challenges, Air Group aircrews flew combat sorties nearly every day in support of the Rapid Corps. The WM-21s and He-46s conducted tactical

---

<sup>80</sup> Dombrády and Tóth, *A Magyar Királyi Honvédség*, pp. 195-6.

<sup>81</sup> Szabó, *MKHL, 1938-1945*, p. 146.

<sup>82</sup> Veszteényi, 'A magyar katonai repülés', pp. V/269-74.

<sup>83</sup> Szabó, *MKHL, 1938-1945*, pp. 146-8.

reconnaissance as well as light bombing missions. CR-42s from the 2/3 'Ricsi' squadron provided escorts and also flew fighter sweep and ground attack sorties. 12 July was a banner day for the squadron, as its pilots scored five air-to-air victories. The same day the unit's replacement arrived: the 1/3 Fighter Squadron (twelve CR-42s) and the 1st Short-range Reconnaissance (nine He-46s) deployed to Kolomea. The 3rd Short-range Reconnaissance Squadron (nine WM-21s) got into action a week later, and by the end of July, the 2/3 Fighter and 7th and 10th Reconnaissance Squadrons returned to Hungary.<sup>84</sup> On 7 August, seven Re-2000s from the 1/2 Fighter Squadron at Szolnok landed at the forward base of Sutyska. The VKF was eager for a combat trial of the MKHL's newest fighter before licence production began. These Re-2000s saw their first significant combat four days later, when they encountered no Soviet fighters, but lost an aeroplane and pilot to ground fire.<sup>85</sup>

The 11 August attack on Nikolayev was conducted in support of the Rapid Corps' advance on the city from the north. Sixty thousand Soviet troops of General Zarkov's Ninth Army were established around the city, and the mile-long bridge spanning the Bug River was the best means to escape encirclement. Vitán's mixed bomber squadron received an order late on 10 August directing an early morning attack by the Ca-135s on Nikolayev's bridge, railway station, and marshalling yards. Just after midnight, the Capronis were loaded with captured Soviet 220-kg bombs. Because not all of the unit's ground crews had arrived, the flight crews assisted in preparing the bombers for the mission. All six Ca-135s made the 05.45 take off, but one had an engine problem and turned back right away. One of the six Re-2000s also missed the rendezvous due to a mechanical problem, but all six CR-42s were there, so the MKHL strike force numbered sixteen. Lieutenant Szakonyi, whose lucky bomb

---

<sup>84</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 245.

<sup>85</sup> Szabó, *MKHL, 1938-1945*, p. 150.

had destroyed the Pruth bridge near Kolomea on 29 June, led the bombers. Heavy AAA along their approach caused the formation to scatter, and Szakonyi's damaged aeroplane was the second to turn toward the bridge. This time, it was his wingman who had the luck: Szakonyi could see a span of the bridge lying in the river. He shifted his attack to the city and dropped his weapons on the railway station. The bombers never regained their formation integrity, each one making for home alone. On this mission, MKHL pilots met Soviet I-16 'Rata' fighters for the first time, and, although the I-16s scored hits on most of the bombers, all five landed safely. The Hungarians claimed eight Ratas destroyed—four each from the bombers and the CR-42s. General Löhr, the commander of the Luftwaffe's 4th Air Fleet, personally awarded the Iron Cross to several Hungarian airmen on the Nikolayev raid.<sup>86</sup> This mission, along with others conducted in the following days by the MKHL around Nikolayev, contributed to the success of the Seventeenth Army operation. Nikolayev fell on 16 August, its capture forcing Zarkov's Ninth Army farther east and leaving isolated Soviet forces in the critical Black Sea port of Odessa to 'fight for their lives.'<sup>87</sup>

After the capture of Nikolayev, the Rapid Corps had a period of rest and performed security operations on Seventeenth Army's right flank. As a consequence, MKHL air activity slowed. On 28 August, Lieutenant Colonel Orosz was replaced by Sándor Gyiresy. This seems to have been part of a normal personnel rotation and not a removal from command. During the nearly two months Orosz was in command, the Rapid Corps Air Group flew 555 sorties, dropped 40,000 kilograms of bombs, and scored twenty-seven aerial victories. This came at the cost of four aircraft and six fliers lost in action. The Air Group

---

<sup>86</sup> J.R. Gaal, 'The Bridge over the River Bug', *Air Combat* Vol. 6 No. 2 (Mar. 1978), pp. 80-7.

<sup>87</sup> J. Erickson, *The Road to Stalingrad* (London, 1975), p. 204.

continued to fight under Gyiresy, but its strength was slowly whittled away as units returned to Hungary and were not replaced. In early October, the 1st Short-range Reconnaissance Squadron was withdrawn, followed soon after by the flight of 1/2 Fighter Squadron Re-2000s (two crashed because of bad weather over the Carpathians). The 1/3 Fighter Squadron returned to Mátyásföld in late November, after flying over 800 combat hours and shooting down nineteen Soviet planes at a loss of two CR-42s. By the end of 1941, the Rapid Corps and the entire MKHL expeditionary force were back on Hungarian soil. Fifty-six Hungarian planes had been destroyed or damaged beyond repair, and thirty-six airmen were dead or missing.<sup>88</sup>

This first phase of the war should be considered a tactical success for the MKHL. The performance of its air and ground crews improved steadily. The Nikolayev raid was remarkable not only for the destruction of the bridge and return of all but one aeroplane, but also because all six Ca-135s were able to get airborne, which was double the usual launch rate. The fighter and reconnaissance units in particular had gained extensive experience in air-ground cooperation and operations in austere environments. MKHL senior leaders must have been very comfortable with the basic unfolding of the 1941 air campaign, because its mission requirements and environmental conditions were so similar to what they remembered from the 1919 interventions—except this time they were moving forward in pursuit, rather than scrambling backwards under pressure. The machines were faster and the bombs bigger, to be sure, but the air defence, reconnaissance and interdiction missions flown by the MHKL were essentially the same as those performed by the Vörös Repülőcsapat or even the Luftfahrtruppen. It must have seemed to Colonel Szentnémedy as if the vigorous and stimulating air power debates of the 1930s had never happened.

---

<sup>88</sup> Punka and Sárhidai, *Magyar sasok*, p. 33.

The withdrawal of the Rapid Corps from Ukraine in December 1941 was the result of a very different debate between Henrik Werth and Ferenc Szombathelyi. As early as August, Werth had begun to arrange training in Germany for the Rapid Corps' reinforcements that he had promised Halder. He had not consulted or even informed Horthy of this plan, but he sent Bárdossy a long memorandum taking the government to task for its lack of enthusiasm for the war, and suggesting Bárdossy offer the Germans at least four or five additional army corps. Bárdossy immediately passed the substance of Werth's harangue to Horthy in a lengthy memorandum of his own. In closing, Bárdossy politely told the Regent to choose between his prime minister and his chief of staff.<sup>89</sup> Shortly after this, General Szombathelyi warned Horthy that the war would be a prolonged affair, and that 'Blitzkriegs were over'. Horthy recalled Szombathelyi to Budapest so that he and Werth could argue their cases. The Regent chose Szombathelyi, and on 6 September named him to replace Werth as Chief of the General Staff.<sup>90</sup> Szombathelyi's first official duty was to accompany Horthy and Bárdossy to Germany for talks with Hitler, Ribbentrop, and the German General Staff. The Regent asked Hitler to release the Honvédség from the Eastern Front. Ribbentrop countered with the suggestion that a withdrawal would 'be very alarming from the point of view of morale', and offered instead to re-equip the armoured brigades of the Rapid Corps. They would then stay engaged against the Soviets through the end of the fighting season, expected to last until mid October. Further, the Germans asked for replacements for the Mountain and Frontier Brigades, and an additional twelve battalions, with the promise that these units would be used only for occupation and security duties. Since the Hungarians were most eager for the return of their elite Rapid Corps and the offer to re-fit the brigades seemed

---

<sup>89</sup> *Horthy Miklós titkos iratai*, pp. 307-8.

<sup>90</sup> Macartney, *October Fifteenth*, II, p. 54.

reasonable, Bárdossy agreed.<sup>91</sup> He tried to squeeze Ribbentrop for further border revision in the northeast and southwest, but the German was noncommittal. When pressed again on the same issue later, Ribbentrop told Bárdossy, 'As long as the war goes on, family quarrels must be suspended.'<sup>92</sup>

Germany's attitude toward Hungarian participation in the war changed dramatically after the success of the December 1941 Soviet counter-offensive in the Moscow sector. Hitler replaced all three army group commanders and named himself Commander-in-Chief of the German Army. Just after Christmas, the Führer wrote to stiffen Horthy's resolve in their shared fight against Bolshevism and to ask for additional Hungarian forces for the summer offensive. Hitler then sent Ribbentrop and Field Marshal Wilhelm Keitel to Budapest in January to work out the details of Hungary's contribution. They were surprisingly straightforward: Hitler wanted the entire Honvédség put at his disposal. Szombathelyi later described the Germans as modifying their view of Hungary's role from 'voluntary participation into an obligation'.<sup>93</sup> Ribbentrop used his customary tactic of comparing Hungary's commitment unfavourably to that of Romania, and implying that a lack of cooperation on Budapest's part would put the Vienna Awards at risk. Bárdossy conceded in principle to a larger Hungarian contingent than agreed in September, but both he and Szombathelyi were surprised at Keitel's opening demand for twenty-three brigades. Szombathelyi eventually consented to sending nine brigades with supporting armour and air

---

<sup>91</sup> Ibid.; Gy. Juhász, *Hungarian Foreign Policy*, pp. 200-1.

<sup>92</sup> Quoted in Gy. Juhász, *Hungarian Foreign Policy*, pp. 200-1.

<sup>93</sup> Quoted in Cornelius, *Hungary in World War II*, p. 184.

formations, and to allow a 20,000-man Waffen SS division to be formed from among the country's ethnic German population.<sup>94</sup>

Organisation of the new formation occupied the VKF through the spring of 1942. During this time, István Horthy was selected Vice Regent, and his father pushed Bárdossy out of the premiership. The two events were not unrelated. Miklós Horthy wanted an established successor to avoid an interregnum in the event of his death or incapacitation. As the Regent recalled, he 'wished the choice to fall on a man of strong character, a man who could make a stand against the ever increasing German pressure.'<sup>95</sup> When his advisors put forward his son István as a candidate, Horthy did not object. Béla Imrédy and the Radical Right did. Ferenc Szálasi called him an 'Anglophile traitor' and 'a dandy with Jewish morals, wallowing delirious in the delights of depravity.'<sup>96</sup> Not to be outdone, Joseph Goebbels wrote in his diary on 20 February: 'Horthy's older son had been elected Vice Regent in the Hungarian Parliament by acclamation. This is a matter of major political rigging...[He] is a pronounced Jew-lover, an Anglophile to the bones, a man without any profound education and without broad political understanding; in short, a person with whom if he were Regent of Hungary, we would have some difficulties to work out.'<sup>97</sup> Miklós Horthy later embraced Goebbels' scorn as proof of István's fitness for the job. About Bárdossy he had grown less sure. The Regent felt the Prime Minister had made too many concessions to Germany, and that his declaration of war against the United States had been a critical error. Bárdossy had to go, and the new prime minister should 'regain Hungary's freedom of action and return, if

---

<sup>94</sup> Dombrády and Tóth, *A Magyar Királyi Honvédség*, pp. 226-7. The requested contribution is also given as 26 divisions (Szabó) and 12 brigades (Cornelius). Waffen SS: Gy. Juhász, *Hungarian Foreign Policy*, pp. 207.

<sup>95</sup> Horthy, *Memoirs*, p. 182.

<sup>96</sup> Quoted in R. Péntek, 'István Horthy's Election as Vice-Regent', in N. Dreisziger (ed.) *Hungary in the Age of Total War* (New York, 1998), p. 76.

<sup>97</sup> Quoted in Cornelius, *Hungary in World War II*, p. 197.

possible, to a state of non-belligerence.<sup>98</sup> This would prove to be an impossible task, although neither Horthy nor his new premier Miklós Kállay understood it at the time.

Between 11 April and 27 July 1942, the Hungarian Second Army moved east in the largest deployment in the country's history.<sup>99</sup> The Second Army was composed of three corps of three light divisions, each of which had only two infantry regiments.<sup>100</sup> At its head was General Gustáv Jány, who had asked to retire after being passed over in favour of Szombathelyi to replace Werth. Horthy had refused his request.<sup>101</sup> The air component was the 2nd Aviation Brigade, commanded by Lieutenant Colonel Sándor András.<sup>102</sup> By the first week of June 1942, the entire brigade had assembled in Ukraine. It consisted of the 1/1 Long-range Reconnaissance Squadron (four He-111s), the 3/1 Short-range Reconnaissance Squadron (twelve He-46s), the 1/1 and 2/1 Fighter Squadrons (eleven Re-2000 Héjas each), and the 4/1 Bomber Squadron (fourteen Ca-135s). The Brigade also had attached six transport aircraft (three each Ca-101s and converted Ju-86s) and a few Bü-131 and FW-58 trainers for liaison flights.<sup>103</sup> Later in the summer, MALERT's Ju-52s were pressed into service as the 2nd Transport Squadron.<sup>104</sup> In place of the tri-colour chevron adopted in September 1938, the Hungarian aeroplanes now bore a new marking—a bold white cross inside a black square—consistent with other Axis air force insignia. The 2nd Aviation Brigade was the rough equivalent to the Rapid Corps Air Group fielded the previous year. However, at 200,000 men, the Second Army was twice the size of the Carpathian Group,

---

<sup>98</sup> Horthy, *Memoirs*, p. 193, 203.

<sup>99</sup> Szabó, *MKHL, 1938-1945*, p. 157.

<sup>100</sup> Dombrády and Tóth, *A Magyar Királyi Honvédség*, pp. 231-2.

<sup>101</sup> Cornelius, *Hungary in World War II*, p. 194.

<sup>102</sup> The unit was called the 1st Flying Group until 15 October, when it became known as the 2nd Aviation Brigade. I use the later designation for clarity.

<sup>103</sup> Szabó, *MKHL, 1938-1945*, pp. 158-9.

<sup>104</sup> Punka and Sárhidai, *Magyar sasok*, p. 40.

and Jány's force would be spread over an area many times larger than the narrow sector through which Szombathélyi advanced.<sup>105</sup> More worryingly, the Red Air Force was far more capable in June 1942 than it had been the previous year. A large proportion of the 5,300 Soviet aeroplanes destroyed in 1941 were obsolete designs already scheduled to be replaced, meaning 'the Luftwaffe simply completed a job that was already being carried out by the Red Air Force itself.'<sup>106</sup> Soviet aircraft factories made up the losses by the end of 1941, producing 5,100 Yak-1, MiG-3 and LaGG-3 fighters, each of which compared favourably with the Héja.<sup>107</sup>

Operation Blue, the German summer offensive designed to seize the Caucasus oil fields, began on 28 June. The plan called for the capture of Voronezh, a city on the east side of the Don River. A bridgehead established, Army Group B would follow the Don south, trapping and eventually destroying the Soviet armies on the west side of the river. The Hungarian, Romanian and Italian contingents would then be left to guard the Don while the Wehrmacht pushed south to the Caucasus.<sup>108</sup> Stalin was convinced the capture of Moscow would be the main German objective in 1942, and the southern attack took the Red Army by surprise. By the end of July, the Hungarian Second Army, exhausted after slogging over 600 miles across Ukraine, took up defensive positions along a 120-mile section of the Don. They soon had orders to take the offensive against three crucial bridges that remained in Soviet hands along the west bank, but due to their lack of heavy weapons, the Red Army units were able to beat back their attacks.<sup>109</sup> Halder did not appreciate the Second Army's efforts, as evidenced by

---

<sup>105</sup> Cornelius, *Hungary in World War II*, pp. 207-9.

<sup>106</sup> R.J. Overy, *The Air War 1939-1945* (New York, 1981), pp. 62-3.

<sup>107</sup> Ibid.

<sup>108</sup> G.L. Weinberg, *A World at Arms: A Global History of World War II* (Cambridge, 1994), pp. 413-14.

<sup>109</sup> Cornelius, *Hungary in World War II*, p. 208.

some of his August 1942 diary entries: ‘The Hungarians are allowing the Russians to come back across the Don!...South of Voronezh the Hungarians are running...The Hungarians are making no progress in cleaning up the west bank of the Don. They stop trying and take up defensive positions.’<sup>110</sup> This was not an entirely fair assessment of the green Hungarian army’s performance. Because Horthy wanted to minimise Hungary’s contribution to the German war effort, he had sent the smallest force he could manage. Each division was short an infantry regiment, so that the nine ‘light’ divisions of the Second Army were equal in manpower to only six German divisions. The disparity in weapons was even more striking: the Hungarian formations had half of the light machine guns and anti-tank guns of their German counterparts, and only 10 per cent of the trucks and tractors.<sup>111</sup> As in the First World War, when compared to a German division, the Hungarian unit was ‘not only smaller, it was also qualitatively inferior.’<sup>112</sup>

The 2nd Aviation Brigade could not compensate for the Second Army’s lack of heavy artillery and anti-tank weapons. Its reconnaissance units were able to provide useful observation of Soviet movements behind the bridgeheads, but raids by the 4/1 Bomber Squadron and the Héjas did not break Red Army resistance in the area. To add to the Brigade’s firepower, He-46s of the 3/2 Short-range Reconnaissance Squadron began to conduct armed reconnaissance from early August. Observation crews were allowed to attack some targets on their own, if they were weakly defended and outside the range of Second Army artillery batteries.<sup>113</sup> Giving reconnaissance crews the freedom to attack the enemy

---

<sup>110</sup> Quoted in M.D. Fenyo, *Hitler, Horthy, and Hungary: German-Hungarian Relations, 1941-1944* (London, 1972), p. 42.

<sup>111</sup> Szabó, *MKHL a második világ háborúban*, p. 117.

<sup>112</sup> Strachan, *To Arms*, p. 284.

<sup>113</sup> Cs. Horváth, ‘A Magyar 2. Hadsereg Közelfelderítő Repülőszázadának működési rendszere a szabályzatok tükrében 1942 június-október’, *HK 107/2* (June 1994), p. 117.

rather than just observe and photograph probably increased morale in the unit, but it had no appreciable effect on Soviet strength in the area, because the He-46s were still too few and too lightly armed. The MKHL needed heavy, rugged aeroplanes capable of conducting accurate strikes on small targets and operating with minimal maintenance. This description fitted the Ju-87, for instance, which the MKHL would field in 1943, and the excellent Red Air Force Il-2, but not the Ca-135 or the Re-2000. Both were somewhat fragile Italian machines that required significant mechanical attention. Lack of spare parts and battlefield attrition gradually reduced the number of mission-ready aeroplanes in the group, so that in the middle of August, only twenty-five aircraft were available for combat.<sup>114</sup> On 29 August, the 4/1 Bomber Squadron reported only one of its nine assigned aeroplanes was airworthy.<sup>115</sup>

One of the Re-2000s ready for a mission on 20 August bore the crossed six-guns of the ‘Sheriff’, Lieutenant István Horthy, Hungary’s Vice Regent. István Horthy had been an avid pilot for years before the war, and was Hungary’s best known aviator. In June 1939, in his role as president of MÁVAG (which at that time produced mainly locomotives), he had flown solo 4,000 miles to Bombay in his Arado Ar-79 sports plane in order to close a deal with the Indian Railways for one hundred locomotives. His competitor had bought all of the seats on the commercial flight to Bombay to keep MÁVAG from competing for the bid, but Horthy beat the airliner to India and had the contract signed when his competitor arrived. This trip was celebrated in the Hungarian press, as was the honeymoon trip he and his bride took in the same Arado around the eastern Mediterranean (they exited the church under an arch of propellers). Horthy’s wife, the Countess Ilona Gyulai, embraced aviation on her

---

<sup>114</sup> Ibid. p. 123; and Szabó, *MKHL, 1938-1945*, p. 187. Twenty-five was the average of 7 days serviceability rates, 11-18 Aug 1942.

<sup>115</sup> G. Punka, *Hungarian Air Force* (Carrollton, Tx., 1994), p. 10.

own, earning her glider pilot's licence in 1940. István Horthy had been the face of his father's Aviation Foundation, and as recently as April 1942 had made a national radio broadcast encouraging Hungarian youth to join the MKHL or flying clubs.<sup>116</sup> A reserve pilot in the 1/1 Fighter Squadron, Horthy had joined the unit in the Soviet Union in July. He had flown twenty-four combat missions and had scored a probable kill against a LaGG-3 fighter on 6 August.

Shortly after 05.00 on 20 August, Horthy and his wingman took off to escort a 3/2 Reconnaissance Squadron He-46. While joining with the Heinkel at approximately 1,000 feet, Horthy's Re-2000 turned sharply left and fell to the ground. He was killed upon impact.<sup>117</sup> The accident investigation could not determine precisely the cause, but from most descriptions of the accident, it seems that the Vice-Regent's engine failed, and while turning back to the airfield for an emergency landing, the Re-2000 entered an accelerated stall from which he could not recover in the available altitude. Rumours of German involvement swirled around the country, and were accepted as true by a great many Hungarians. Horthy's death further soured the public against Hitler's war in the east, and the outpouring of grief and condolence for the Regent and his family strengthened the Admiral's hand politically, even as his resilience wavered. No one else was appointed Vice-Regent.<sup>118</sup>

In his last letter home, István Horthy praised the Hungarian cavalry, armour and artillery units, and commended a few senior officers to his father, but the overall tone was negative. István offered the Regent his own assessment of the prospects for victory, and recommended a Hungarian withdrawal:

---

<sup>116</sup> I.E. Gyulai, *Honour and Duty: The Memoirs of Countess Ilona Edelsheim Gyulai, Widow of Vice-Regent Stephen Horthy of Hungary* (Lewes, 2005), pp. 497-8, 41, 38, 93.

<sup>117</sup> Punka and Sárhidai, *Magyar sasok*, p. 42.

<sup>118</sup> Macartney, *October Fifteenth*, II, p. 110-2.

Our losses have been fairly heavy recently because of a lack of momentum. If I may give you some advice: let's not send reinforcements but rather concentrate our forces. If we constantly replenish our units we will just bleed to death in terms of both men and equipment. The Russians won't by any means be beaten by the end of this year; they are fighting very strongly and are well supplied with munitions and food, so in my opinion they won't be any weaker next year, in fact just the opposite.

I don't know whether this is true, but apparently another two divisions are coming out to act as occupying forces. This news disheartened me greatly because we already have more troops here than we can afford. How reassuring it would be if Bartha were no longer in the minister's seat; I feel he's the evil spirit behind this.

One more sad topic, the Jewish companies: I gather there are twenty or thirty thousand Jews out here who are completely at the mercy of the sadists. It makes my stomach turn it's revolting. It's awful that this could happen even in the twentieth century... I'm afraid we'll have to pay a heavy price for this sometime. Couldn't they be taken home to work there? Otherwise few of them will survive the winter.<sup>119</sup>

István's comments about the Defence Minister and the Jewish labour companies must have struck a chord, since the Regent relieved Bartha on 25 September.<sup>120</sup> He was replaced by Vilmos Nagy, who had been the military attaché in London.<sup>121</sup>

Szombathelyi remained Chief of the General Staff, and in early September he paid a visit to the Second Army at the front. On 5 September he dined with the 2nd Aviation Brigade commander, Lieutenant Colonel András, and the commander of the 1/1 Fighter Squadron (István Horthy's unit), Major Kálmán Csukás. The men discussed the Aviation Brigade's future in Ukraine. András relayed to Szombathelyi the opinion of Lieutenant General Rákosi, commander of Lepság, that the Brigade should stay in the field despite its matériel shortages 'to shore up the morale of the ground forces'. Szombathelyi agreed, saying 'the reputation of the air force demands this'.<sup>122</sup> The open-cockpit He-46s and cantankerous Ca-135s were especially ill suited to the brutal winter on the steppes, however, and András pulled them from the line. At the end of October, both the 4/1 Bomber and 3/2 Short-range

---

<sup>119</sup> Reprinted in Gyulai, *Honour and Duty*, p. 499.

<sup>120</sup> Ibid. p. 114. Bartha's replacement, Vilmos Nagy, attributed the change to Bartha's tolerance for the mistreatment of Jews in the labour companies.

<sup>121</sup> Cornelius, *Hungary in World War II*, p. 214.

<sup>122</sup> Quoted in Szabó, *MKHL, 1938-1945*, p. 201.

Reconnaissance Squadrons were withdrawn from operations over the Don sector. In the course of one thousand sorties, three Ca-135s had been destroyed in combat and eleven of its crewmen killed. The dead included the 4/1 commander, Major István Mocsáry, who was killed along with his crew on 14 August while attacking Soviet troops around the bridgehead at Uriv.<sup>123</sup> Only one He-46 was lost, and the squadron's gunners claimed three Red Air Force aircraft shot down. András moved west along with his Brigade's aeroplanes: he was sent back to serve on the Lepság staff, and Colonel Tibor Fráter assumed command of the 2nd Aviation Brigade.<sup>124</sup>

With the departure of the 4/1 and 3/2 squadrons, the Brigade's only combat contributions came from the 1/1 Long-range Reconnaissance Squadron and the 1/1 and 5/2 Fighter Squadrons. The newly arrived 5/2 Fighter Squadron had left its CR-42s in Hungary, and converted to Re-2000s under the instruction of 2/1 Squadron pilots. The reconnaissance squadron, whose He-111s had first been replaced by Dornier Do-215s confiscated from Yugoslavia, received Ju-88s from the Luftwaffe in November. The 1/1 Fighter Squadron had also begun operating German aeroplanes. Before his departure for the Lepság staff, András had convinced Luftwaffe Lieutenant General Korten to supply twelve Bf-109s for operational conversion in the field. Thirteen fighter pilots trained by the Luftwaffe's 52nd Fighter Wing (*Jagdgeschwader*, or JG 52) formed the initial Hungarian Bf-109 cadre, which was led by Lieutenant György Bánlaky. After providing the aircraft and training, JG 52 shared operational control of 1/1 Fighter Squadron with Fráter.<sup>125</sup> MKHL pilots made good use of the Messerschmidt machines. On 16 December, Lieutenant Imre Pánzél shot down four Il-2 attack aircraft in two sorties. He soon scored two additional victories, thus

---

<sup>123</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 253.

<sup>124</sup> Szabó, *MKHL, 1938-1945*, p. 206.

<sup>125</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 255-6.

becoming the first Hungarian ace of the Second World War. He was killed in combat on 11 January 1943.<sup>126</sup>

The following day, the Soviet counter-offensive that had begun in November around Stalingrad reached the Hungarians on the Don River. The Red Air Force committed two air armies to the Voronezh front: four hundred combat aircraft, including 138 fighters and 154 attack aeroplanes.<sup>127</sup> The assault began when two Red Army divisions, supported by armour, launched a probing attack from the Urv bridgehead that penetrated three miles into the Hungarian sector. A counter-attack by the German 700th Armoured Group on 13 January failed to dislodge the Soviets. On the 14th, the Soviet Fortieth Army tore a 25-mile-wide gap in the Second Army's lines.<sup>128</sup> General Jány requested permission to retreat on 15 January, but Army Group B headquarters refused, saying only Hitler could approve such a request. After permission was denied again the next day, he appealed to Szombathelyi, who confirmed the need to follow German orders. With the situation deteriorating quickly, he finally ordered retreat on the morning of 17 January.<sup>129</sup>

The 2nd Aviation Brigade's fighter squadrons were based at Ilovskoje, which happened to be the point on which the Soviet pincers were converging. After the Luftwaffe ordered its aeroplanes there to fall back west, Lieutenant Colonel Fráter asked to follow suit. He was told to wait. With the Red Army approaching on 18 January, the evacuation of Ilovskoje was approved. The transport squadron's Ju-52 and Ju-88s from the reconnaissance squadron carried away as many airmen and supplies as possible, and Lieutenant Colonel Csukás was tasked with the airfield's defence. The Re-2000s would not start in the bitter cold (-20

---

<sup>126</sup> Neulen, *In the Skies of Europe*, p. 129.

<sup>127</sup> Szabó, *MKHL, 1938-1945*, p. 214.

<sup>128</sup> P. Szabó, 'Hungarian Soldiers in World War Two: 1941-1945', in L. Veszprémy and B.K. Királyi (eds.) *A Millennium of Hungarian Military History*, trans. E. Arató (New York, 2002), pp. 452-4.

<sup>129</sup> Cornelius, *Hungary in World War II*, pp. 221-2.

degrees C), and ten Héjas, along with one Ar-96, were blown up lest they fall into Soviet hands. In the battle to defend the airfield on 19 January, Csukás and approximately fifty MKHL personnel were killed. The Ilovskoje disaster forced a stand-down and reorganisation of the 2nd Aviation Brigade. All of the 5/2 Fighter Squadron's Re-2000s had been destroyed, so it was equipped with three Bf-109s from 1/1 when it received eight new Messerschmitts in February. The Brigade lost a total of thirty-six aeroplanes and eighty-two airmen in the January and February fighting. In addition to the Héjas torched at Ilovskoje, seven Bf-109s, five Ar-96s, and two each of the Ju-88s, Ju-86s and FW-58s were destroyed.<sup>130</sup>

These losses were nothing in comparison to the catastrophe that befell the rest of the Hungarian Second Army. Over the course of Second Army's deployment, it suffered casualties in excess of 50 per cent, the vast majority of these coming in January and February 1943. Of the 250,000 Hungarians (including the approximately 50,000 Jewish labourers) who departed for Ukraine in spring 1942, approximately 50,000 were killed, the same number wounded, and 28,000 taken prisoner.<sup>131</sup> For Hungary's future military capacity, the destruction of equipment was even more devastating. 'All of the armour was lost; almost all of the artillery (one regiment saved one gun out of twenty-four); 70 to 80 per cent of the heavier arms of the infantry (machine guns, trench mortars, etc), about half the horses, practically all the stores, and a high proportion even of the rifles, for many of the exhausted men had jettisoned even these in their flight.'<sup>132</sup> Defence Minister Nagy estimated that all of the arms left in Hungary could equip only four and a half light divisions.<sup>133</sup> The

---

<sup>130</sup> Punka and Sárhidai, *Magyar sasok*, p. 42.

<sup>131</sup> P. Szabó, 'Hungarian Soldiers in World War Two', p. 455.

<sup>132</sup> Macartney, *October Fifteenth*, II, p. 135.

<sup>133</sup> *Ibid.*

2nd Aviation Brigade on 1 March 1943 had thirty-three aeroplanes.<sup>134</sup> The Honvédség needed German weapons.

Hitler was not, however, inclined to supply them. He had always favoured the Romanians in arms shipments, primarily because Romanian oil was dearer to him than Hungarian grain, but he had also come to doubt the Hungarian fighting spirit, at least when the fighting was done on Germany's behalf. When approached with a request for Bf-109s in 1942, the Führer gave this response:

That would just suit the Hungarian gentlemen! They would not use the single-seaters against the enemy but just for pleasure flights! Aviation fuel is in short supply and I need pilots who attack and not ones who go on pleasure flights. What the Hungarians have achieved in the aviation field to date is more than paltry. If I am going to give some aircraft, then rather to the Croats, who have proved they have an offensive spirit. To date we have only experienced fiascos with the Hungarians.<sup>135</sup>

Fortunately for the MKHL, an arrangement had been made that did not rely on Hitler's steadfast good will. In the spring of 1941, negotiations between the two defence ministries had resulted in a joint aircraft production programme for the manufacture of Bf-109s, Me-210s and Daimler-Benz DB-601 engines. Fulfilment of the production quotas would allow the Lepság to reach its Huba-III aeroplane targets at the end of 1943: 75 Héjas, 100 Bf-109s, 78 Ju-87s, 250 Ju-88 and 70 Ju-52s. The arrangement was not for licence production, in which a flat fee is paid for the right to manufacture, but rather for shared output, at agreed ratios of 1.5 to 1 for the Bf-109s and 1 to 1 for the Me-210s. After ironing out the inevitable early wrinkles, production rate was expected to reach fifty aeroplanes and two hundred engines per month by 1943. From the domestic production, the MKHL anticipated obtaining 225 Bf-109s and 160 Me-210s.<sup>136</sup> The major factories involved were Manfréd Weiss,

---

<sup>134</sup> Szabó, *MKHL, 1938-1945*, p. 223.

<sup>135</sup> Quoted in Neulen, *In the Skies of Europe*, p. 131.

<sup>136</sup> Szabó, *MKHL, 1938-1945*, p. 40.

MWG, and Dunai Repülőgépgyár RT (DRGY), a new concern formed by Weiss with German support. Total investment for the German production programme was 152 million pengős.<sup>137</sup>

The Hungarian factories spent the entire year of 1942 tooling up for production. MÁVAG alone made sixty-two WM-21s in 1941, but output for the entire country the next year was only seven aircraft: four FW-58s, one Bf-109, one Me-210, and one Héja. Engine production was hardly better, as just ten DB-605s (an improved version of the 601) and fifty Hirth HM-504s intended for Bü-131s were completed. The rates increased substantially in 1943: one hundred thirty Héjas, the majority of MÁVAG's run of 170 aircraft, rolled off the line that year, along with all 230 of the WM-14 engines required for the series. The German-Hungarian programme got under way, resulting in completion of ninety-two Bf-109Gs and fifty-three Me-210s. Monthly production did not reach the expected rate of fifty per month until the spring of 1944, after which it decreased dramatically due to the effects of the Allied bombing campaign.<sup>138</sup> The 13 April 1944 US Fifteenth Air Force raid on Győr caused heavy damage to the MWG plant and severely restricted subsequent Bf-109 output. After that attack, component manufacturing was distributed throughout thirty-four villages around Győr. Allied bombing of the WM and DRGY factories on Csepel Island ended Me-210 and engine construction in October 1944.<sup>139</sup> The table below shows the production figures for combat aircraft and engines by year. Production of the German aircraft and engines peaked in the first half of 1944, after which it fell precipitously because of the destruction of factories by Allied bombers. Output continued to diminish through the end of the year,

---

<sup>137</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 214.

<sup>138</sup> Szabó, *MKHL, 1938-1945*, pp. 51-3.

<sup>139</sup> Punka, *Hungarian Air Force*, pp. 22, 41.

when the Red Army's occupation of the factories around Budapest brought it to a final halt.<sup>140</sup>

Aircraft	1941	1942	1943	1944	Total
WM-21	62				62
Héja		1	130	39	170
FW-58		4	30	38	72
Bf-109		1	92	395	488
Me-2110		1	53	216	270
Ju-52			3	27	30
<hr/> Engines <hr/>					
WM-14			230		230
DB-605		10	427	615	1052

Reggiane fulfilled its 1939 contract for Re-2000s in 1943, and Caproni delivered thirty-two additional Ca-135s in May 1942. With those exceptions, there were no substantial deliveries of combat aircraft from foreign producers after the invasion of the Soviet Union.<sup>141</sup> The Regia Aeronautica and Luftwaffe needed every up-to-date combat aeroplane that its factories could construct, leaving only trainers and obsolete models for purchase. There were direct transfers of Luftwaffe aircraft to the MKHL, such as the one that gave twelve Bf-109s to the 1/1 Fighter Squadron in early 1943. Between June 1942 and March 1944, at least 170 of MKHL's combat aircraft were passed on directly from Luftwaffe units.<sup>142</sup> It is possible that the number of aeroplanes moved off the books from German to Hungarian units was substantially higher. At the ratio of 1 to 1.5 for the Bf-109s produced in Hungary, the MKHL should have received only 158 of the machines in 1944. There are no indications of normal contractual deliveries of Bf-109s to the MKHL from German factories, but the 101st Fighter Regiment reported fielding a total of 400 Bf-109s in that

<sup>140</sup> Szabó, *MKHL, 1938-1945*, pp. 51-3.

<sup>141</sup> *Ibid.* p. 59.

<sup>142</sup> Neulen, *In the Skies of Europe*, p. 131.

year, of which eighty were serviceable at the end of the year, with another seventy under repair.<sup>143</sup>

The RLM received some compensation for those aircraft in the form of raw materials. Hungarian oil production, especially in the Lisper field southwest of Lake Balaton, increased dramatically during the war, from 42,000 tons in 1938 to 840,000 tons in 1943. Hungary thus became Germany's second largest oil supplier after Romania. Refining capacity lagged behind crude production, which made the existing refineries on Csepel Island and at Pét especially critical to the Axis war effort. Nearly as important were Hungary's deposits of bauxite, the base ore for aluminium. There was in 1939 a single aluminium plant on Csepel Island that fed the Manfréd Weiss works. Its output in 1940 of 3,200 tons was sufficient for domestic needs. With German prodding and capital, an additional plant was built in 1942, and under German direction, Hungarian aluminium production reached 20,000 tons. The majority of that was exported to Germany, along with 90 per cent of its raw bauxite production.<sup>144</sup> The massive export of natural resources did not correct Hungary's balance of payment deficit with Germany. At the end of 1941, Budapest owed Berlin 140 million DM; the debt swelled tenfold to 1.5 billion DM in December 1944.<sup>145</sup>

The transfer of aircraft in the field were undoubtedly appreciated by the local MKHL commanders, but they were considered favours granted, not contracts fulfilled, and therefore often resulted in the unit receiving the Luftwaffe's cast-offs coming under some measure of German command. That was indeed the situation for Hungarian airmen in the east for most

---

<sup>143</sup> Contract purchases: Szabó, *MKHL, 1938-1945*, pp. 59-60; 400 Bf-109s: Punka and Sárhidai, *Magyar sasok*, p. 52.

<sup>144</sup> E.A. Radice, 'The Development of Industry', in M.C. Kaser and E.A. Radice (eds.) *The Economic History of Eastern Europe 1919-1975*, Vol. II (Oxford, 1986), pp. 436-7; oil tonnage in 1938, 90 per cent bauxite: Romsics, *Hungary in 20th Century*, pp. 142, 207.

<sup>145</sup> Romsics, *Hungary in 20th Century*, p. 207.

of 1943. The 2nd Aviation Brigade still existed as an organisation, but it remained extremely weak. There was little will in Budapest to reinforce it and, until production ramped up late in the year, there were no suitable aeroplanes to send. Fighter pilots of 1/1 and 5/2 Squadrons flew Bf-109s in Ukraine, mostly conducting ground attack sorties with 250-kilogram bombs, and occasionally escorting Luftwaffe bombers. They scored twenty aerial victories during the battle of Kursk, and accounted for 132 Soviet aircraft destroyed by the end of 1943. Through the summer, the Hungarian units retreated west along with the Luftwaffe, passing back along the route they had followed two years earlier.<sup>146</sup> After their autumn 1942 recall from the front, 3/1 and 4/1 Bomber Squadron pilots departed for Istres, France, where they learned to fly Ju-88s, the Luftwaffe's standard light bomber. The 1/1 Long-range Reconnaissance Squadron had by that time also converted to Ju-88s, although without the benefit of a stay in France. It operated wholly under the command of the Luftwaffe, and in November, when the prospects of ever adding additional squadrons to the reconnaissance group disappeared, its designation was simplified by dropping the '/1'.<sup>147</sup>

The November change was a result of a VKF paper that formally abandoned the air force structure of the Huba-III plan. In 'Guidance for the air force battle order in the 1943/44 organisational year', the General Staff acknowledged that material shortages made it impossible to reach the goals set out three years earlier. Instead, the staff proposed an organisation of four groups: an expeditionary formation, an air defence formation, a border defence formation, and a training establishment. This plan was endorsed by Lieutenant

---

<sup>146</sup> Ibid. p. 132.

<sup>147</sup> Punka and Sárhidai, *Magyar sasok*, p. 46.

General Sándor Magyarosy, the new head of the Légügyi Főcsoportfőnökség, and approved by the government.<sup>148</sup>

The new MKHL organisational plan took effect on 1 January 1944. On that day, the expeditionary force in the Soviet Union became known as the 102nd Aviation Brigade. The 5/2 Fighter Squadron, composed of twelve Bf-109s, followed the Brigade's lead and changed its designation to 102/1 Independent Fighter Squadron. The 3/1 Short-range Reconnaissance Squadron had twelve FW-189s, but the 1st Long-range Reconnaissance Squadron was down to six Ju-88s.<sup>149</sup> The MKHL focused on defence of the homeland. Budapest's air defence formation consisted of the 2/1 and 5/3 Fighter Squadrons (eighteen Héjas until 15 February, then Bf-109s), the 5/1 Night Fighter Squadron (eighteen Me-210s). The border defence group comprised thirteen squadrons. Three were short-range reconnaissance squadrons, two of which were still flying the He-46s procured in 1937. The Ungvár squadron (4/2) operated Me-210s. The 1/1 Fighter Squadron at Szolnok had been forced back to Héjas until enough Bf-109s became available in August. The other fighter squadrons were equipped with Bf-109s. Debrecen's 3/2 Bomber Squadron flew Ca-135s, but the other four bomber units had Me-210s. The lone transport squadron at Pápa kept MALERT's Ju-52s in service. Training aeroplanes were obsolete combat machines: WM-21s, Héjas, and Ju-86s.<sup>150</sup>

Even as the air force was taking steps to strengthen capital defence, the government was desperate to exit the war. Horthy's determination to secure a separate peace had intensified after the destruction of the Second Army, and Hungarian peace feelers had gone out all over Europe. Kállay's emissaries were authorised to inform British or American officials that

<sup>148</sup> Szabó, *MKHL, 1938-1945*, pp. 111-12.

<sup>149</sup> Neulen, *In the Skies of Europe*, pp. 132-3.

<sup>150</sup> Szabó, *MKHL, 1938-1945*, p. 112.

Hungary would not resist an Anglo-American or Polish army, and that the Honvédség was prepared to act against the Wehrmacht if required. The British were the most receptive of the Allies to the idea of Hungary leaving the war on terms other than complete surrender, but even they demanded some concrete steps from Budapest that Horthy and Kállay judged would result in a German takeover of the country. Hitler was well aware of Kállay's pro-Western orientation, and had confronted Horthy about it in April 1943. Horthy defended his premier, but his protestations did nothing to assuage German suspicion. Ribbentrop remarked to the German minister in Budapest that Horthy's support of Kállay only proved 'the Regent's full approval of the Prime Minister's policy of defeatism and detachment from the Axis Powers.'<sup>151</sup> After Italy defected to the Allies in September 1943, Hitler ordered plans prepared for the occupation of Hungary and Romania.<sup>152</sup>

Operation Margarethe I was implemented in modified form on 19 March 1944. Two days earlier, Hitler called Horthy to Klessheim Castle to coerce him into agreeing to the German occupation. Hitler demanded the re-instatement of Imrédy and Rátz, and Horthy was to instruct the Hungarian people to welcome the occupying Wehrmacht. The Regent refused. After many hours, a compromise emerged. Horthy would appoint an acceptable government, but German troops must thereafter be withdrawn. The Regent tried to leave Klessheim right away, but Ribbentrop contrived an air raid alert to delay him. Foreign Minister Jenő Ghyczy sent an encrypted telegram, but it, too, was deliberately delayed.<sup>153</sup> The German military attaché informed Kállay that paratroops would occupy airfields around the capital at 04.00, and that eleven German divisions would arrive in Budapest by 06.00.

---

<sup>151</sup> Gy. Juhász, *Hungarian Foreign Policy*, p. 239.

<sup>152</sup> I. Mócsy, 'Hungary's Failed Strategic Surrender: Secret Wartime Negotiations with Britain', in N. Dreisziger (ed.) *Hungary in the Age of Total War (1938-1948)* (New York, 1998), p. 99.

<sup>153</sup> Cornelius, *Hungary in World War II*, pp. 275-8; Gy. Juhász, *Hungarian Foreign Policy*, pp. 287-91; Macartney, *October Fifteenth, II*, pp. 233-46.

The VKF estimated there were nine or ten German divisions poised on Hungary's borders, along with ten Romanian and one Slovak. The only Honvéd units capable of sustained resistance were in the Carpathians. Furthermore, a telegram from General Szombathelyi had arrived, instructing the army to treat the Germans as friends, and in the absence of a countermanding order, Generals Károly Beregffy and János Vörös advised Kállay that they could not execute an order to resist.<sup>154</sup> The Prime Minister floated the idea of evacuating the government by air to Transylvania, but Lepság deputy commander Lieutenant General Vilmos Hellebronth demurred, reminding Kállay that the airfields were not equipped for night-time takeoffs.<sup>155</sup> Kállay did order the MKHL to disperse available aircraft to avoid possible internment by German paratroops. Kállay recalled the Wehrmacht's entry: 'In the early morning hours the German occupying army marched in in full style, bands playing. Budapest had to be shown the German bayonets. But a great surprise was awaiting the Germans... There was no jubilant crowd in the streets to greet the parading Germans: not one hat was tossed in the air; not one handkerchief was waved; not one cheer was sounded.'<sup>156</sup> When Horthy arrived in Budapest on the morning of the 19th, his train was met by a German guard of honour. The occupation had been accomplished.<sup>157</sup>

Horthy convened a Crown Council that afternoon. Kállay resigned, with immediate effect; he refused even to sign the minutes of the meeting. The rest of the government also stepped down, and the Regent declined to appoint a new one right away, preferring instead to have the seconds in each ministry administer affairs for a few days. The Germans continued to press for Imrédy, whom Horthy refused to appoint. Eventually Horthy

---

<sup>154</sup> N. Kállay, *Hungarian Premier: a personal account of a nation's struggle in the Second World War* (New York, 1954), pp. 419-25.

<sup>155</sup> Dombrády and Tóth, *A Magyar Királyi Honvédség*, p. 316.

<sup>156</sup> Kállay, *Hungarian Premier*, p. 426.

<sup>157</sup> Macartney, *October Fifteenth*, II, pp. 245-46.

convinced Döme Sztójay to accept the premiership. Sztójay was one of Hitler's favourite Hungarians, but Horthy believed that, as a soldier, Sztójay would prove loyal to the regent as head of the armed forces. Rátz was named deputy prime minister. General Lajos Csataj, appointed the previous June after Nagy's philo-Semitism and irregular personal finances had made him vulnerable to the radical right, remained as Defence Minister. Szombathelyi continued to serve as Chief of the General Staff until he was replaced by Beregffy in April. Kállay escaped the Gestapo by seeking asylum in the Turkish embassy, where he lived until October. Horthy went into a state of semi-exile in the palace.<sup>158</sup>

In the first days of the occupation, the Wehrmacht confined Honvédség troops to the garrisons. Although the operational plan involved disarming the Hungarian soldiers, it was not widely implemented, because Szombathelyi had ordered a friendly reception. The German military commander in the country recorded on 19 March: 'Only one place where Hungarian troop disarmament took place. And only because my command did not arrive in time. But we took care of it...Nowhere any opposition.' And the following day: 'The situation is quiet. The Hungarian troops accept us loyally. The population is in general neutral.'<sup>159</sup> It would be more accurate to say that the Honvédség was loyal to the Regent, who had, through the Chief of the General Staff, instructed the army to admit German forces to their installations. German actions showed they had no confidence in the Honvéd's loyalty to the Reich. General Greiffenberg, promoted after the occupation from attaché to 'Plenipotentiary General of the Wehrmacht in Hungary' established 'operational zones' in eastern parts of the country and put them under German military control. 'Greiffenberg was also given secret orders that he would have to institute a general purge' of the officer

---

<sup>158</sup> Ibid. pp. 247-53, 255; Kállay, *Hungarian Premier*, p. 427-38.

<sup>159</sup> Quoted in Cornelius, *Hungary in World War II*, p. 280.

corps.<sup>160</sup> Besides Szombathelyi, General Náday, commander of the First Army, was also sacked, and the Gestapo arrested two senior intelligence officers, Major General István Újszászy and Colonel Gyula Kádár.<sup>161</sup> The purge extended well beyond the army, including several political leaders known to be hostile to Nazism, such as the Keresztes-Fischer brothers and Endre Bajcsy-Zsilinszky (who was wounded in a shoot-out with the agents sent to arrest him).<sup>162</sup>

The German occupation had two effects on the MKHL. The immediate effect was that all units were grounded until the situation had settled. When it was apparent that there would be no defections, normal operations resumed. The definition of normal operation changed right away, however, because in the aftermath of the occupation, Allied bombers began striking targets in Hungary. As long as there was the possibility of a separate peace with Budapest, the B-17s and B-24s of Fifteenth Air Force had passed over Hungarian airspace with little resistance on their way to targets in Austria and Romania.<sup>163</sup>

That uneasy existence ended on 3 April with a 200-bomber raid on the Csepel Island aircraft factories. The OLP controllers working in the caves under Gellért Hill scrambled 2/1 Fighter Squadron at 11.00, and its sister squadron 1/1, a few minutes later. The large group of American bombers had not made their customary turn to the northwest over Lake Balaton.<sup>164</sup> The air raid sirens sounding in Budapest were mostly ignored, because there had not been an aerial attack on the capital since a pair of ineffectual Soviet raids in September

---

<sup>160</sup> Macartney, *October Fifteenth*, II, pp. 258, 253n.

<sup>161</sup> Cornelius, *Hungary in World War II*, p. 287.

<sup>162</sup> Macartney, *October Fifteenth*, II, p. 254. Bajcsy-Zsilinszky was eventually released, but continued to lead the resistance. He was captured again and executed on 24 December 1944.

<sup>163</sup> Although the first substantial combat between the MKHL and Fifteenth Air Force occurred on 17 March, the intercepted bombers had turned back from a raid on Vienna due to bad weather. Two MKHL Bf-109s were shot down in this inaugural encounter, with a few B-17s possibly damaged. J.R. Gaal, 'The Bombs of April', *Air Combat* Vol. 7, No. 5 (Sep. 1979), p. 75.

<sup>164</sup> *Ibid.* p. 76.

1942.<sup>165</sup> The 2/1 pilots first tried a tactic based on the speculations of the cadre of the Experimental Squadron in which they approached under the bomber formation before attacking on the flank. It was believed that the bomber's wing would shield the fighter from defensive fire until the last second, but this proved ineffective. Undeterred, the Hungarians managed to shoot down one bomber and one escorting P-38, at the loss of one Bf-109 and pilot.<sup>166</sup> Over 1,000 people were killed and 500 wounded in the Fifteenth Air Force raid.<sup>167</sup> Through the month of April, the raids were sporadic but destructive. The MKHL responded to each one, but with paltry results, in part due to the deficiencies of the OLP's air defence system. Poor communications and inexperience meant the Gellért Hill controllers sometimes vectored the fighters to an empty piece of sky. On 13 April, they compounded the error by directing the fighters to land at Ferihegy to refuel just as bombs started landing on the airfield.<sup>168</sup> The 1/1 and 2/1 Fighter Squadrons flew 114 sorties in April 1944 and accounted for six Allied aircraft. Three Hungarian pilots were killed in action.<sup>169</sup>

Attacks intensified through the spring and early summer. The planners of the Anglo-American Combined Bomber Offensive were instructed to give 'top priority to bombing communications in Romanian and Hungary and to treat the whole European transport system "as one" when undermining German mobility.'<sup>170</sup> The Allies' concentration from June on destroying the sources of German oil also brought more bombers to Hungary, whose oil fields south of Lake Balaton had grown from almost nothing before the war to an annual

---

<sup>165</sup> Soviet raids: R.J. Overy, *The Bombing War: Europe 1939-1945* (London, 2013), p. 231.

<sup>166</sup> Gaal, 'The Bombs of April', p. 76.

<sup>167</sup> Szabó, *MKHL, 1938-1945*, p. 236.

<sup>168</sup> Gaal, 'Bombs of April', pp. 77-8.

<sup>169</sup> Szabó, *MKHL, 1938-1945*, pp. 236-7.

<sup>170</sup> Overy, *The Bombing War*, pp. 293-4.

production of 840,000 tonnes per year.<sup>171</sup> Hundreds of Allied bombers attacked in waves, and, despite being reinforced by eighty fighters of the Luftwaffe's 8th Fighter Wing, the defenders were simply overwhelmed. The 14 June attack on the Pét nitrogen plants was a red-letter day for the combined Axis air defence forces: they claimed eighteen American aeroplanes destroyed (eleven to AAA, five to MKHL fighters, two to the Luftwaffe). That success was followed by the 'black day' raids on 16 June. Twenty-eight MKHL fighters from the 101st Fighter Group (a new formation created out of existing Budapest squadrons) scrambled to meet the American force of 658 bombers and 290 fighters. Five P-38s fell, but at the astounding cost of thirteen Hungarian fighters.<sup>172</sup> Not all raids were so one-sided, but even when the MKHL defenders exacted a heavy cost from the attackers, as on the 14 June Pét raid, it made no difference to the direction of the battle. The Americans came back the next day, or the next week, with bigger formations, while the Hungarian force just got smaller. By September, fuel shortages kept MKHL fighters on the ground during many USAAF bombing raids. As refined aviation fuel became more scarce, the Luftwaffe retained most of the stock for its own use.<sup>173</sup> With fewer defence fighters challenging the bomber force, American fighter aircraft began low-level attacks on Hungarian airfields. These raids proved effective in further eroding the MKHL's air defence fleet.

That fleet had performed well when compared to its German counterparts. According to Luftwaffe records, from March to November 1944, the height of the Allied bombing raids, its pilots flew 932 daytime air defence sorties over Hungary. Those flights resulted in seventy-three confirmed victories against American attackers, at a loss of eighty-eight

---

<sup>171</sup> Ibid. p. 594; 840k tonnes: Fenyő, *Hitler, Horthy, and Hungary*, p. 241.

<sup>172</sup> Nagyváradai et al., *Fejezetek a repülés történetéből*, p. 214; Punka, *Hungarian Air Force*, pp. 14-5.

<sup>173</sup> D. Bernád et al., *A nemzet szárnyai: a magyar katonai repülés évszázados története* (Budapest, 2013), p. 47.

Luftwaffe aeroplanes and forty-three casualties. In the same time, the MKHL flew 649 defensive missions and scored 107 kills, while losing seventy-eight aircraft and thirty pilots.<sup>174</sup> These figures show that the Hungarians destroyed an enemy aeroplane for every six sorties flown, while the Germans needed thirteen flights on average to achieve a victory. The MKHL suffered a higher rate of aeroplane losses (one per eight flights) than the Luftwaffe (one every eleven flights), but pilot casualties were identical (one loss per twenty-two sorties). The motivation of defending one's homeland could account for the MKHL's greater lethality, as could the decreasing experience level of German pilots owing to the extremely high casualty rates in other theatres.<sup>175</sup>

Because many MKHL records were destroyed in the war, exact figures for personnel and aircraft losses are difficult to determine. The records of the Horthy Aviation Academy did survive, however, and they show that nearly 700 cadets passed into the air force from Kassa. Through the second class of 1944, the last to face sustained battle, over 20 per cent of the officers from the academy were killed in combat or crashes.<sup>176</sup> Even though primary flight aeroplanes were imported throughout the war, (100 Bü-131s arrived from Germany in 1944), the training schools struggled to replace these airmen.<sup>177</sup>

In early October 1944, the Red Army began its attack on Debrecen, and the weight of the Hungarian defence efforts shifted to the east. The American bombers were not yet left alone. On 5 November, however, four MKHL pilots were shot down, and four more were killed on the next two days. That spelled the end of the American Season.<sup>178</sup> From 7

---

<sup>174</sup> Cited in *ibid.*

<sup>175</sup> The average Luftwaffe monthly loss rates in all theatres in 1944 was 1,754 (Overy, *The Air War*, p. 186.) The loss rate over Hungary Mar-Nov 1944 of five per month equals .29 per cent of that total.

<sup>176</sup> Rada, *Ludovika Akadémia*, pp. 345-54.

<sup>177</sup> Szabó, *MKHL, 1938-1945*, p. 60.

<sup>178</sup> Nagyvárad et al., *Fejezetek a repülés történetéből*, p. 271.

November, 101st Home Defence Wing only sent its units to attack the Soviet army grinding their way across the plain.<sup>179</sup>

By that date, the Royal Hungarian Air Force had ceased to exist in any significant way, because Hungary itself had become a true puppet state of Germany. As German losses mounted through the summer of 1944, Admiral Horthy began to reassert himself as the head of state. After forcing an end to the deportation of Hungary's Jews to the death camps, Horthy finally forced Sztójay to resign. In his place he appointed General Géza Lakatos, who had previously commanded both the First and Second Armies. The change occurred on 29 August, just days after Romania had deserted the Axis for the Allies. Finland left the war on 2 September, and Bulgaria on 5 September. The time was ripe for Hungary to conclude its peace, too. After the Red Army broke through the Hungarian defence line in the Carpathians on 6 September, Horthy called a Crown Council. The Council was reluctant to approve an armistice; days of negotiation and dithering followed. The cabinet was no more resolute. Horthy decided to send General Náday to the West as his personal envoy, accompanied by Colonel Charles Howie, a South African prisoner of war working with the Hungarian underground. The two stole away in a Heinkel flown by a former MALERT pilot named János Majoros. They reached Foggia on 22 September, but because Náday did not have written authorisation from Horthy to negotiate on Hungary's behalf, he made no headway with the Allied leaders there.<sup>180</sup>

At the same time, negotiations began with the Soviets through a Hungarian count with freedom to move in Slovakia. The Hungarian mission that was sent to Moscow in the first days of October maintained radio contact directly with the Palace. After some delays

---

<sup>179</sup> Punka, *Hungarian Air Force*, p. 17.

<sup>180</sup> Cornelius, *Hungary in World War II*, pp. 312-9; Horthy, *Memoirs*, pp. 222-6.

attributable to the amateur radio operators in Budapest (Horthy's son Nicky, István's widow Ilona, and the Regent's aide-de-camp), Lieutenant General László Faragó reached acceptable terms with Molotov on 10 October. According to the terms, Hungary would cease operations against the Soviet Union; would within 10 days pull its forces out of territory gained after 1937; and would declare war against Germany. The German Plenipotentiary in Hungary, Edmund Veessenmayer, had of course learned of Horthy's plan, and was prepared to counter it. The German commando Major Otto Skorzeny (most famous for his rescue of Mussolini) had arrived in Budapest in late September, and Veessenmayer had Szálasi waiting in the wings to take over the government.<sup>181</sup> Feeling mounting pressure from German troops around Budapest and from Soviet leaders in Moscow, Horthy announced the armistice to the cabinet on 14 October, five days earlier than he had planned.<sup>182</sup>

The Germans were ready. Skorzeny's team kidnapped Nicky Horthy, rolled him in a carpet and took him to Mauthausen. Ilona told her father-in-law about the kidnapping minutes before the beginning of the Crown Council. All members of the Council, including the pro-German stalwarts, approved of the decision to sign the armistice. Horthy's sense of honour required him to inform Veessenmayer of his intentions before broadcasting the proclamation. Lakatos had prevailed on Horthy to strike out a key clause of his address that declared Hungary at war with Germany. The message that went out was therefore somewhat more vague than Horthy realised, and his call for Honvéd soldiers to follow the orders of their commanders allowed room for real mischief. General Vörös approved an order that contradicted the Regent's message, and instructed the army to fight on until told

---

<sup>181</sup> Macartney, *October Fifteenth*, II, pp. 356-9.

<sup>182</sup> Horthy, *Memoirs*, pp. 228-9.

otherwise.<sup>183</sup> General Béla Miklós of the First Army went over to the Red Army as Horthy had intended, but his subordinate commanders did not follow. The Second Army's commander, General Lajos Dálnoki-Veress, was arrested by his own chief of staff before he could do the same.<sup>184</sup> Horthy was convinced that the army would follow the directive of the Supreme War Lord, and he was stunned when he realised that hardly any large Honvédség formations had changed sides. Through the evening of 15 October, German troops in Budapest completed the occupation begun on 19 March. Around 04.00, the Regent was awakened and encouraged to send his family to the Papal Nuncio for protection. He was prepared to resist to the last, but Lakatos had already agreed an abdication with Veesenmayer. The Regent eventually yielded. Horthy twice refused to appoint Szálasi prime minister, but gave in after threats against Nicky, and signed a letter of abdication. The Regent told Veesenmayer that he had neither appointed Szálasi nor resigned, but had merely exchanged his signature for his son's life.<sup>185</sup> Horthy and his family left for house arrest in Bavaria on 17 October. Nicky was liberated from Dachau (he had been moved from Mauthausen) in May 1945.

The Hungarian army, of whose loyalty Horthy had been confident, failed almost entirely to heed his 15 October order. General Miklós directed his senior subordinate commanders in the First Army to obey the Regent and defect. Not a single corps or division commander did so. One regimental commander who attempted to change sides had his own order disobeyed, and was executed by the Germans.<sup>186</sup> Each commander who continued to fight alongside the Wehrmacht would have had his own set of rationales for his actions. A list of those might

---

<sup>183</sup> Macartney, *October Fifteenth*, II, pp. 414-6. Horthy writes that Vörös assured him he had no personal knowledge of the order, pp. 231-2.

<sup>184</sup> Cornelius, *Hungary in World War II*, pp. 312-9

<sup>185</sup> Horthy, *Memoirs*, pp. 236-7.

<sup>186</sup> Macartney, *October Fifteenth*, II, p. 445.

include an ideological affinity for National Socialism, a strong pro-German ethnic or cultural identity, antipathy toward communism, fear of foreign occupation, desire to retain the Vienna Award territories, feelings of camaraderie for German soldiers, or simple confusion about the validity of the Horthy order when countermanded by Vörös. It is of course possible that all of those notions could be held at once without serious cognitive dissonance, and without feeling oneself a traitor to Hungary. Certainly there were officers who were so committed to the tenets of National Socialism that their loyalty to Hungary came a poor second. Horthy was aware of that contingent and had tried since the days of Gömbös to reduce their numbers and influence. Events suggest that he had underestimated both. The officer corps seems to have had more men like Rátz, Werth, Bartha, Homlok, and Beregffy than those like Szombathelyi and Keresztes-Fischer, or even Horthy himself. But even for those Honvédség officers who were not ideologically motivated to cling to Germany, the idea of swapping sides was distasteful. It must have been nearly impossible for them to see the advancing Red Army as a potential ally, and the Germans they had fought alongside for three years as the enemy. For twenty-five years—or the entire lifetime of a Honvédség company commander—Hungary had mourned its losses in the First World War, and reviled the Russian-inspired communism that had preceded the Romanian intervention. That the order to surrender to the Soviets came from Admiral Horthy, the exemplar of revisionism and anti-bolshevism, would have seemed too bizarre to credit. The right thing for the nation, they might have reasoned, would be to fight the invading Russians, Romanians and Slovaks as long as possible. This notion comports with the concept of conditional loyalty proposed earlier. Just as the Hungarian Red Army began

defecting to Horthy's Whites when Kun retreated from Czechoslovakia, the Honvédség refused to defect to the Soviets while they had an allied army still willing to fight.

There were no unit defections in the MKHL, either. Hungarian airmen would have felt even closer to their German comrades than did the Honvéds. The relationship between the MKHL and Luftwaffe had been more intimate than that between Honvédség and Wehrmacht. Hungarian pilots flew German planes, with German training and using German tactics. Although the squadrons themselves remained separate, German and Hungarian pilots often shared the same airfields. They also shared a bond as combat airmen. These factors made it extremely unlikely that a large collection of airmen would have crossed over to the Soviet side.

It is intriguing, however, that the fascistic fervour found in the Luftwaffe and Regia Aeronautica was largely absent in the MKHL. Both the German and Italian air forces were known as the services most penetrated by radicalism, but the Hungarian air force, despite its dependence on those services for equipment and training, appears to have been less affected by extremism than the army. Perhaps the biggest reason lies in the personalities of the leaders. Both Göring and Balbo were devoted to fascism, and both were larger-than-life, charismatic figures. They deliberately promoted air power in political terms. The inter-war Hungarian aviation leaders, namely István Petróczy and László Háry, were well regarded, or even loved, by their airmen, but neither was a political radical, or even especially charismatic. The later prominence of István Horthy in the MKHL, with his liberal pro-Western orientation, suggests the air force was a comfortable place for moderates or the apolitical. The very small size of the clandestine Hungarian air service also made it statistically unlikely that many radicals would be found there. Furthermore, the modest

cadre of officers with flight experience made it more difficult for Gömbös and his successors to pack the service with radicals possessed of the necessary technical abilities.

Nevertheless, Hungarian airmen fought on beside the Luftwaffe into 1945. The Szálasi coup made little operational difference to the MKHL, which was by then a force in unalterable decline, unable to exercise initiative. As a sign of its collapse as an airborne force, Ferenc Szálasi appointed Lieutenant General Emil Justy, an air defence artillery officer, to command the MKHL. Through the winter 1944-45, Hungarian pilots engaged in hopeless contests against the aircraft supporting the 3rd Ukrainian Front forces besieging Budapest. In December 1944, MKHL pilots shot down twenty-eight Soviet aeroplanes, but could only muster two Ju-52s to assist the Luftwaffe in aerial re-supply missions. During one eleven-day period of the siege, the Hungarians flew 291 sorties and destroyed sixteen Red Air Force aircraft. In the same time, the Soviets flew more than 8,000 sorties.<sup>187</sup> After the capital fell, the remnants of the MKHL conducted a fighting retreat westward toward Austria. Its last aerial victory came on 27 March against an American P-38. Two days later it suffered its last combat casualty, when Major János Báthy was killed near the old Habsburg centre of aviation, Wiener Neustadt. As in 1918 and 1919, Hungarian airmen defended their country until they no longer had airfields from which to operate, and then they attempted to salvage as many aircraft as possible from the invaders.

---

<sup>187</sup> Neulen, *In the Skies of Europe*, pp. 144-5.

## Conclusion

Thus the Second World War ended for Hungarian airmen in a manner very much like the First World War and the 1919 intervention. It was not just the ending that was familiar. In many ways, the experience of the Magyar Királyi Honvéd Légierő was remarkably similar to that of the Habsburg Luftfahrtruppen. That this would prove to be so might have come as a surprise to readers of *Magyar Katonai Szemle* in the mid 1930s; it certainly was not the outcome that Ferenc Szentnémedy had led them to expect. Szentnémedy had predicted a Douhetian future of unrestricted air warfare, in which the heart of the enemy was laid open to direct attack by fleets of bombers impervious to air defence, and capable of destroying the adversary's will to resist. As it happened, the closest Hungarian bombers ever got to a strategic attack was the two-day retaliation campaign against Stanislau and Strij. The MKHL, like the Luftfahrtruppen and the Vörös Repülőcsapat, was a tactical air force whose primary missions were air defence, aerial reconnaissance, and battlefield interdiction. In the chaos that followed the 1918 dissolution of the imperial army, Hungarian airmen had deliberately stressed continuity in creating the first national air service. During the lean years that followed, visionaries among them had argued for something far removed from the First World War field aviation model: an independent air force with the organisational and operational autonomy to pursue a war-winning strategy. The airmen won the argument, for a time, but their inability to fulfil the promise of air power resulted in a service subordinated to its own army, and eventually its patron's air force. This was something of a regression to the mean, yielding continuity in spite of plans to the contrary.

Hungary's failure to develop an air force capable of effective independent operations is

entirely predictable, even natural, given its strategic context and economic capabilities.<sup>1</sup>

Hungarian foreign policy during the Horthy era had one goal: the reclamation of the territories lost after the First World War. Successive governments agreed that this objective required rearmament and military expansion, including the development of a capable air force. Notions of massive bomber fleets spreading through continental popular culture had begun to take root in Hungary, and the idea of an autonomous air force was not anathema to Hungarian political leaders. Unrestricted air war did not suit Hungary's strategic context, however, and, if attempted, could have been counter-productive. Hungarian revisionism, even in its maximalist form, had fairly limited aims—it required only the reoccupation of contiguous territories sliced away at Trianon. Aerial destruction of Prague or Bucharest might have been satisfying to consider, but it would have been a strategic disaster, inviting certain western retaliation. That an air force was expressly prohibited by treaty did not dissuade Hungary from trying to protect and expand its air service, but it did place sizeable obstacles in its path by severely limiting its ability to purchase, produce, or operate military aeroplanes.

The creation and sustainment of an air force that could conduct strategic bombing campaigns was also beyond Hungary's economic capability. The world-wide economic crisis of the early 1930s had hit Hungary late, but hard, erasing the financial gains realised in the late 1920s. Lack of capital and collapsing commodity prices left Hungary unable to finance further large weapons purchases. Only Mussolini's willingness to extend arms credits to Horthy's regime allowed Hungary to slowly modernise and expand its clandestine

---

<sup>1</sup> Strategic context, economic capability, scientific and technical mobilisation, and political and social reception are the factors identified by R.J. Overy as conditioning the evolution of air forces. See his essay 'Air Power in the Second World War: Historical Themes and Theories' in H. Boog, *The Conduct of the Air War in the Second World War* (Oxford, 1992).

air service. It was not until the institution in 1938 of Imrédy's Győr programme that Hungary's rearmament was domestically funded, and its billion pengős were raised from internal loans and a one-time wealth tax—hardly a formula for a sustainable defence build-up. Hungary possessed large deposits of bauxite and some oil, but these industries were under-developed until German wartime investment financed their expansion.

Hungary also lacked the scientific and technical mobilisation required to create a strategic air force. Habsburg factories had not been able to provide sufficient aeroplanes for the LFT in the First World War, and the situation had not improved for an independent Hungary in the intervening years. The country had neither the established aircraft manufacturing capacity nor the raw economic strength required to create one from scratch. The country did have a few industrial concerns, such as Manfréd Weiss and MÁVAG, that could produce foreign designs and make incremental improvements, but even those production lines, subsidised by foreign credits, could not sustain the MKHL losses in combat. Air power, perhaps more than any other form of military strength, requires a strong industrial base. No country, with the possible exception of present-day Israel, has been able to become even a regional air power without manufacturing its own combat aeroplanes in substantial numbers. As Hungary's experience with both Italy and Germany shows, reliance on foreign producers can lead to inopportune interruptions in the supply (as when Berlin held up deliveries of He-112s to Budapest, but fulfilled Bucharest's order) or to on-time delivery of inadequate machines (the returned Ca-310s). Kálmán Csukás, who later commanded 1/1 Fighter Squadron and was killed at Ilovskoje, recognised in March 1940 the difficulties that a small country would face in trying to conduct an independent air war. He suggested that in the future, small countries would probably fight as part of a larger alliance.

Further, he wrote, ‘small countries normally do not possess their own independent aviation industry, but rather purchase particular types from large powers. They have to be familiar with the large power’s strategic concept, because only then can one judge whether the material is suitable for its objective.’<sup>2</sup>

The strategic context and economic and industrial deficiencies should not have caused Hungarian airmen to abandon the idea of a strong, and even independent, air force, but perhaps more consideration should have been given them when planning the air service’s force structure. Having no vital interests outside the Danube basin, Hungary had no immediate need for long-range bombers. An all-fighter force based on the WM-14 engine and the CR-42 and Re-2000 could have fulfilled the critical missions of Hungarian aviation: defending the country’s exposed industrial centre, supporting the Honvéd in limited ground incursions, and blunting an armoured invasion. A tactical air fleet of comparatively few varieties of single-engine aeroplanes would have simplified production and repair, as well as aircrew training, and it would have permitted the MKHL to build deeper stocks of spare parts. Increased pilot proficiency and a concentration on tactical operations would have encouraged the development of more sophisticated tactics, and could have led to innovations in fields such as aerial communications and close air support.

This approach (very similar to the one championed by Mecozzi) would have been no less dependent on political and social receptiveness than was the one followed by the LÜH. The *Justice for Hungary* flight and the later crash, Bánhidi’s Gerle 13 successes, and the glamour of international travel increased air-mindedness among the Hungarian public. Support for air power among the Hungarian political and military elites turned out to be broad but shallow. The enthusiasm created for the air arm in the 1930s was fleeting, and

---

<sup>2</sup> Csukás, ‘Önálló légiháború’, p. 45.

could have been intensified by its very prohibition by Trianon. Once the service was able to operate in the open, criticism of its performance increased, and the organisational weaknesses were exposed. After the Regent withdrew his protection of the MKHL, the General Staff was able to re-assert control of the air arm. Had the airmen inclined toward independence pressed their case with less vehemence in the 1930s, it is possible that the service would have gained its autonomy somewhat later, but maintained it much longer. That is by no means certain, however, for a more restrained campaign could have resulted only in a force of short-range reconnaissance squadrons, one of the options proposed by the VKF in 1938.

Ultimately, this study of the Hungarian air service demonstrates the degree to which circumstances constrain action. Examinations of the American, British, Japanese and German air forces often turn on principles declared, decisions taken, and opportunities missed. Those are of critical importance indeed, and the intellectual history of the Hungarian air force as depicted in its professional journal occupies a central part of this paper. But the great powers were free to follow their strategic and operational concepts in a way that was completely unknown to the smaller combatants. The composition and employment of the large air forces, at least in the first years of the war, reflected their airmen's conceptions of aerial warfare. In marked contrast, the Hungarian airman operated from the beginning at a severe disadvantage. The years of aerial disarmament deprived him of realistic training and experience in large-force operations, and the lack of adequate domestic aircraft production meant that he flew too little, and in out-of-date machines. Unlike his German comrade, he found that equality of arms was merely a legal status, not a tactical reality.

## BIBLIOGRAPHY

Manuscripts and Archival Studies

## Hadtörténelmi Levéltár (HL)

HL Honvédelmi Minisztérium Elnöki

HL HM Eln. 5141/37.-1919.

HL HM Eln. 16059/37.-1919.

HL HM Eln. 16385/37.-1919.

HL HM Eln. 21626a/37.-1919.

HL HM Eln. 21688/37.-1920.

HL HM Eln. 16606/6.k-1927

Balogh, J., 'Nyilatkozat az 1941.jún.26.-i Bustyaháza feletti légiincidensről',  
HL Tanulmánygyűjtemény (Tgy) 2.979, pp. 1-3.

Horváth, M., 'Visszaemlékezés (repülő élményei 1915-től 1918-ig és 1919-es  
tábori pilóta élményei)' (1973), HL Tgy 3.643.

Pirity, M., 'Visszaemlékezés', HL Tgy 3.707.

Vesztényi, J., 'A magyar katonai repülés, 1920-1945' (1978), HL Tgy 2.787.

Winkler, L., 'A magyar repülés története 1927-1945' (1992), HL Tgy 3.327.

—— 'A Magyar Királyi Honvéd Légierő harci repülőgépeinek fejlődéséről' (1994),  
HL Tgy 3.643.

## Hadtörténelmi Intézet Könyvtára (HIK)

Petróczy, I., 'A legyőzött Németország aviatikája: Tanulságok és teendők' (1921),  
HIK 5271.

## Magyar Műszaki és Közlekedési Múzeum Levéltára (MMKM)

A. Fehér, 'Berepülő pilóta naplója, 1915-1927', MMKM 988.

Dr. Szentkirályi Ákos hagyatéka, MKKM 108.

## Magyar Országos Levéltár (MOL)

K. 589/8930-12

Printed Primary Sources

- ‘2 More Airplanes Poised for Sea Hop’, *The Washington Post*, 25 June 1931, 1.  
ProQuest Historical Newspapers.
- Advertisement, *The Times*, 18 Apr. 1896,  
<<http://www.victorianlondon.org/entertainment/indiaandceylon.htm>>.
- ‘Aeronautics: For Hungary’, *Time*, 27 July 1931.  
<<http://content.time.com/time/magazine/article/0,9171,752959,00.html>>
- Arady, I., ‘Magyar cserkészlet és légoltalom’, *Riadó* 1/1 (Oct. 1937), p. 28.
- Armistice Conditions with Austria-Hungary*, 3 Nov 1918.  
<<http://www.forost.ungarisches-institut.de/pdf/19181103-1.pdf>>
- Ascension Captive broadsheet advertisement, <<http://www.tipsimages.it>>.
- ‘Austria Stunned’, *The Times*, 7 Jun 1919: 11. The Times Digital Archive.
- Ballon Captif Godard poster, 1896, <<http://posters.navtech.aero/pages/00192.html>>.
- Balloon Park poster, 1893, <<http://posters.navtech.aero/pages/00213.html>>.
- Bobok, M., ‘Vállalkozás ejtőernyőkkel az ellenség hátában’, *MKSz* 3/1936, pp. 132-135.
- ‘Budapest Flight Plan to Aid Hungary,’ *New York Times*, 8 July 1930, 8.  
ProQuest Historical Newspapers.
- ‘Captain Magyar Lands as an Immigrant’, *New York Times*, 13 Nov. 1931, 4.  
ProQuest Historical Newspapers.
- Chateau Aerien broadside advertisement, 1894, <<http://www.tipsimages.it>>.
- Ciano's Diary, 1939-1943*, M. Muggeridge, (ed.), (London, 1947).
- Clausewitz, C. von, *On War*, trans. M. Howard and P. Paret (Princeton, 1976).  
— *A haborúról*, trans. S. Hazai (Budapest, 1917).
- The Confidential Papers of Admiral Horthy* (Budapest, 1968).
- Csukás, K., ‘Az önálló légiháború’, *MKSz* 3/1940, pp. 700-6.
- Diplomáciai iratok Magyarország külpolitikájához 1936-1945*, Volume II, Zsigmond, L.,  
and Ádám, M., (eds.), (Budapest, 1965).

*Documents of German Foreign Policy, 1918-1945, Series D, Volume 2.*

*Documents on British Foreign Policy, 1919-1939, First Series, Volume XII, Butler, R., and Bury, J.P.T., (eds.), (London, 1962).*

—— First Series, Volume XVI, Butler, R., and Bury, J.P.T., (eds.), (London, 1986).

—— First Series, Volume XXII, Medlicott, W.N., and Dakin D., (eds.), (London, 1986).

—— First Series, Volume XXIV, Medlicott, W.N., and Dakin D., (eds.), (London, 1986).

—— First Series, Volume XXVI, Medlicott, W.N., and Dakin D., (eds.), (London, 1985).

—— First Series, Volume XXVII, Medlicott, W.N., and Dakin D., (eds.), (London, 1986).

—— Series 1a, Volume V, Medlicott, W.N., and Dakin D., (eds.), (London, 1973).

—— Series 1a, Volume VII, Medlicott, W.N., Dakin D., and Lambert, M.E., (eds.), (London, 1975).

—— Series II, Volume III, Woodward, E.L., and Butler, R. (eds.), (London, 1948).

‘Az első légi hadjárat’, *Riado!* 3/12 (15 Nov. 1939), pp. 314-16.

Eszenyi, D., ‘Támpontok a bombázó hajózó személyzet kiképzéséhez’, *MKSz*, 2/1940, pp. 422-431.

*Flight*, ‘The Great Powers and Aviation’, 24 Apr. 1909, p. 232, <[www.flightglobal.com](http://www.flightglobal.com)>.

—— ‘Austrian Military Dirigible’, 11 Dec. 1909, p. 801.

—— ‘354 Aero Club de France Pilot Aviators’, 4 Feb. 1910, p. 88.

—— ‘German Pilot Aviators’, 18 Mar. 1910, p. 230.

—— ‘Aviators’ Certificates’, 7 Jan. 1911, p. 11.

—— ‘More Continental Aviators’, 6 May 1911, p. 402.

—— ‘Accidents to Flyers’, 3 Dec. 1911, p. 997.

—— ‘Federation Aeronautique Internationale’, 5 Apr. 1913, p. 387.

—— ‘Aircraft and the War’, 17 Feb. 1916, p. 144.

- ‘The Fokker F III Commercial Monoplane’, 26 May 1921, p. 56.
- ‘Hungarian Atlantic Flight Succeeds’, 24 July 1931, p. 730.
- ‘Croydon-Hungary Non-Stop’, 21 Sep. 1933, p. 951.
- ‘Magyar Pilota Pic Nic’, 27 Sep. 1934, pp. 1003-4, 1028.
- ‘Forty-seven Lives Lost in Airship Accidents’, *New York Times*, 14 July 1910,  
<<http://query.nytimes.com/mem/archive-free/pdf>>.
- Hellebronth, G., ‘A légiháború és a védekezés módjai’, *MKSz* 8/1935, pp. 100-3.
- ‘A légiháború és a védekezés módjai’, *MKSz* 6/1936, pp. 117-122.
- ‘A légiháború és a védekezés módjai’, *MKSz* 11/1937, pp. 96-105.
- Horthy Miklós titkos iratai*, Szinai, M., and Szűcs, L., (eds.), (Budapest, 1965).
- Horthy, N., *Memoirs* (New York, 1957).
- ‘How Hungary Received the Treaty’, *The Times*, 19 Jan. 1920, p. 11.  
The Times Digital Archive.
- ‘Hungarians to Fly Here’, *New York Times*, 5 Sep. 1930, p. 12.  
ProQuest Historical Newspapers.
- Imperial and Royal General Staff, *Die Armeemanöver in Nordungarn* (Vienna, 1912).
- Italian General Staff, *The Italo-Turkish War (1911-12)*, trans. R. Tittoni  
(Kansas City, Mo., 1914).
- Kállay, N., *Hungarian Premier: a personal account of a nation's struggle in the Second World War* (New York, 1954).
- Károlyi, M., *Memoirs of Michael Karolyi: Faith Without Illusion*, trans. C. Károlyi  
(Oxford, 1956).
- Knauss, R., *War in the Air*, trans C. Sykes (London, 1932).
- ‘Leszállás nélkül akar Los Angelesből Csikágóig repülni Magyar Sándor és Endresz György’, *Uj Nemzedék*, 28 Aug. 1930, p. 10.
- ‘Lindbergh Picks a Plane’, *Popular Mechanics*, Nov. 1930, pp. 803-5.
- Madarász, L., *Légi háború: A repülők harcászata* (Budapest, 1928).

*A Magyar Tanácsköztársaság röplapjai: bibliográfia és dokumentumgyűjtemény* (Budapest, 1959).

*A Magyar Vörös Hadsereg 1919, válogatott dokumentumok* (Budapest, 1959).

Németh, L., 'Polgári légvédelem', *MKSz* 12/1935, pp. 97-100.

'Nincs kizárva, hogy tavaszra marad a "Justice for Hungary" amerikai startja', *Uj Nemzedék*, 24 Aug. 1930, p. 5.

'Oceanic Airmen's Congress. Hungarian Delegates Killed in Crash', *The Times*, 23 May 1932, p. 16. The Times Digital Archive.

Petróczy, 'A lengyel lég és gázvédelmi liga tevékenysége', *MKSz* 7/1932, pp. 121-127.

—— 'Hogyan szervezte meg németország a polgári légvédelmet', *MKSz* 1/1933, pp. 126-132.

'Przemysl leltára', *Husadik Század*, April 1915, <<http://www.husadikszazad.hu/1915-aprilis/politika/przemysl-leltara>>.

Rakolczai, S., 'Légvédelmi és légoltalmi gyakorlatok Budapesten', *Riadó!* 2/10 (Oct. 1938) pp. 294-8.

Round Table, 'Disarmament', *The Commonwealth Journal of International Affairs*, 22:87 (1932), pp. 532-51.

Seversky, A. de, 'Strategy of Air Power More Humane than Blood-bath of Surface Warfare', *The Pittsburgh Press*, 13 Nov 1943, p. 1.  
<<http://news.google.com/newspapers?nid=1144&dat=19431113&id=bzAbAAAAIBAJ&sjid=kUwEAAAIAAJ&pg=4151,4780988>>. Accessed 8 May 2012.

Sólyom, A., 'A Spanyol háboru a légierők szempontjából', *MKSz* 3/1938, pp. 119-129.

Szálasy, F., 'A légi erők befolyása a hadászatra', *MKSz* 5/1932, pp. 123-130.

Szentnémedy, F., 'Az 19.. évi háboru', *MKSz* 3/1931, pp. 29-39.

—— 'Az 19.. évi háboru', *MKSz* 4/1931, pp. 90-102.

—— 'Az 19.. évi háboru', *MKSz* 5/1931, pp. 93-107.

—— 'Az 19.. évi háboru', *MKSz* 6/1931, pp. 102-115.

- ‘Vélemények és eszmék Douhet “Az 19.. évi háboru” című tanulmánya kapcsán’, *MKSz* 7/1931, pp. 102-17.
- ‘A honi légvédelem problémái és korszerű légvédelmi gyakorlatok’, *MKSz* 5/1932, pp. 108-123.
- ‘A genfi leszerelési tárgyalások légügyi eredményei’, *MKSz* 11/1932, pp. 96-118.
- *A repülés* (Budapest, 1933).
- *Légiháború 1938-ban: Páris szétrombolása* (Budapest, 1935).
- ‘Van-e védelem a korlátlan légiháború ellen?’, *MKSz* 6/1935, pp. 96-110.
- ‘Új hadműveleti irányelvek a légiháborúra’, *MKSz* 10/1935, pp. 121-135.
- ‘A repülőök szerepe az olasz-abesszin háborúban’, *MKSz* 4/1936, pp. 102-116.
- ‘Az olasz repülőerők működése Abessziniában’, *MKSz* 9/1936, pp. 102-116.
- ‘A légiháború és a védekezés módjai’, *MKSz* 11/1936, pp. 105-120.
- ‘A függőleges átkarolás kérdéséhez’, *MKSz* 2/1937, pp. 97-111.
- ‘Az ejtőernyő újabb katonai jelentősége’, *MKSz* 4/1937, pp. 115-131.
- ‘Visszapillantás a légügy múlt évi fejlődésére’, *MKSz* 1/1938, pp. 113-139.
- ‘A magyar légierő első diadala’, *MKSz* 6/1939, pp. 108-18.
- ‘Szerdán délelőtt ¼ 11 órakor érkezik meg Endresz és Bittay koporsója a Déliavasuti pályaudvarra’, *Huszdik Század*, May 1932.
- Tóth, E., ‘Szállítások repülés’, *MKSz* 5/1936, pp. 91-96.
- ‘Csapaszállítások repülőgéppel és ejtőernyős kirakások’, *MKSz* 7/1936, pp. 116-118.
- ‘Légiháboru Spanyolországban’, *MKSz* 6/1937, pp. 97-104.
- Treaty of Peace Between the Allied and Associated Powers and Hungary and Protocol and Declaration, Signed at Trianon June 4, 1920, Part V. Military, Naval and Air Clauses.* <<http://www.ibiblio.org/hyperwar/////ETO/Dip/Trianon.html>>
- ‘Victory for Radio’, *The Washington Post*, 17 July 1931, p. 3. ProQuest Historical Newspapers.

Printed Secondary Sources

- Balogh, E.S., 'Nationality Problems of the Hungarian Soviet Republic', in I. Völgyes (ed.), *Hungary in Revolution, 1919: Nine Essays* (Lincoln, Nebr., 1971), pp. 89-120.
- Barczy, Z., and Sárhidai, Gy., *A Magyar Királyi Honvédség légvédelme, 1920-1945* (Budapest 2010).
- Berend, I.T., *Decades of Crisis: Central and Eastern Europe before World War II* (Berkeley, 1998).
- 'Agriculture', in Kaser, M.C., and Radice, E.A. (eds.), *The Economic History of Eastern Europe 1919-1975*, Vol. I (Oxford, 1985), pp. 148-209.
- Bernád, D., 'A Román Királyi Légierő első magyarországi hadjárata', *Aero Historia*, (August 1991), pp. 32-46.
- , Magó, K., and Punka, Gy., *A nemzet szárnyai: a magyar katonai repülés évszázados története* (Budapest, 2013).
- Biddle, T.D., *Rhetoric and Reality in Air Warfare: The Evolution of British and American Ideas about Strategic Bombing, 1914-1945* (Princeton, 2002).
- Bonhardt, A., Sárhidai, Gy., and Winkler, L., *A Magyar Királyi Honvédség fegyverzete* (Budapest, 2002).
- Borsányi, J., 'A 1941 június 26-ai kassai bombatámadás "fehér foltjai"', *HK 104/2* (June 1991), pp. 88-122.
- Botting, D., *The Giant Airships* (Alexandria, Va., 1981).
- Bödök, Z., *Magyar feltalálók a repülés történetében* (Dunaszerdahely, 2002).
- Cain, A.C., *The Forgotten Air Force*, (Washington, 2002).
- Caprotti, F., 'Technology and geographical imaginations: representing aviation in 1930s Italy', *Journal of Cultural Geography*, 25:2, pp. 181-205.
- Cartledge, B., *The Will to Survive: A History of Hungary* (London, 2006).
- Chadwick, H.M., *The Nationalities of Europe and the Growth of National Ideologies* (Cambridge, 1945).

- Chant, C., *Austro-Hungarian Aces of World War I* (Oxford, 2002).
- Cole, L., and Unowsky, D. (eds.), *The Limits of Loyalty: Imperial Symbolism, Popular Allegiances, and State Patriotism in the Late Habsburg Monarchy*, (Oxford, 2007).
- Cornelius, D., *Hungary in World War II: Caught in the Cauldron* (New York, 2011).
- Cornwall, M., *The Undermining of Austria-Hungary: The Battle for Hearts and Minds* (London, 2000).
- Corum, J.S., *The Luftwaffe: Creating the Operational Air War, 1918-1940* (Lawrence, Kan., 1997).
- ‘Airpower Thought in Continental Europe between the Wars’, in Meilinger, P.S. (ed.), *The Paths of Heaven: The Evolution of Airpower Theory* (Maxwell AFB, Ala., 1997), pp. 151-182.
- and Muller, R.R., *The Luftwaffe's Way of War: German Air Force Doctrine, 1911-1945* (Baltimore, 1998).
- Csima, J., ‘Olaszország szerepe a Horthy-hadsereg fegyverkezésében (1920-1941)’, *HK 16/1* (1969), pp. 289-312.
- Csizmarik, V. I., ‘A Magyar Tanácsköztársaság Légereje’, *HK 16/2* (1969), pp. 350-387.
- Czirók, Z., ‘A magyar repülőcsapatok 1918-1919. évi történetéhez’, *HK 122/3* (2009), pp. 603-644.
- ‘Az első légihaború Magyarország fellett-1919’, *HK 2/2011*, pp. 335-361.
- Csonkaréti, K. and Sárhidai, G., *Az Osztrák-Magyar Monarchia tengerészeti repülői, 1911-1918* (Budapest, 2010).
- Davies, R.E.G., *A History of the World's Airlines* (London, 1964).
- Deák, I., *Beyond Nationalism: A Social and Political History of the Habsburg Officer Corps, 1848-1918* (Oxford, 1990).
- Dénes, E., ‘Igló bombázása’, *Magyar Szárnyak* (1986) pp. 5-7.
- Denzel, M.A., *Handbook of World Exchange Rates, 1590-1914* (Farnham, 2010).
- Dienes, I., *A honfoglaló Magyarok* (Budapest, 1978).
- Dombrády, L., *Hadsereg és politika Magyarországon, 1938-1944* (Budapest, 1986).

- and Tóth, S., *A Magyar Királyi Honvédség, 1919-1945* (Budapest, 1987).
- Drabek, Z., 'Foreign Trade Performance and Policy', in Kaser, M.C., and Radice, E.A. (eds.), *The Economic History of Eastern Europe 1919-1975*, Vol. I (Oxford, 1985), pp. 379-531.
- Dreisziger, N.F., 'New Twist to an Old Riddle: The Bombing of Kassa (Košice), June 26, 1941', *The Journal of Modern History* Vol. 44 No. 2 (June, 1972), pp. 232-42.
- Eby, C.D., *Hungary at War: Civilians and Soldiers in World War II* (University Park, Pa., 1998).
- Ellis, J. and Cox, M., *The World War I Databook: The Essential Facts and Figures for All the Combatants* (London, 2001).
- 'Endresz György', *Magyar életrajzi lexikon, 1000-1990*.  
<<http://mek.oszk.hu/00300/0355/html/ABC03609/03756.htm>>
- Erickson, J., *The Road to Stalingrad* (London, 1975).
- Farkas, M., 'The Military Collapse of the Austro-Hungarian Monarchy, October 24 to November 3, 1918', in Pastor, P. (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Col., 1988), pp. 11-23.
- Fenyő, M.D., *Hitler, Horthy, and Hungary: German-Hungarian Relations, 1941-1944* (London, 1972).
- Fritzsche, P., *A Nation of Fliers: German Aviation and the Popular Imagination* (Boston, 1992).
- Fülöp, M., and Sipos, P., *Magyarország külpolitikája a XX. században* (Budapest, 1998).
- Gaal, J.R., 'Baptism of Fire', *Aero Album* (Winter 1972), pp. 42-4.
- 'Bombers at Large', *Air Combat* Vol. 5 No. 6 (Nov. 1977), pp. 83-89.
- 'The Bridge over the River Bug', *Air Combat* Vol. 6 No. 2 (Mar. 1978), pp. 80-7.
- 'Austro-Hungarian Air Corps, 1918-1920', *Air Classics* 14/9 (Sep. 1978), pp. 75-81.
- 'The Bombs of April', *Air Combat* Vol. 7, No. 5 (Sep. 1979), pp. 74-82.
- Gellért, T., 'Adalékok a magyar Polgári Demokratikus Forradalom és a Tanácsköztársaság Légijerejének történetéhez', *HK* 12/3 (1965), pp. 502-523.
- 'General Giulio Douhet: An Italian Apostle of Air Power', *Royal Air Force Quarterly*, 7/1

- (1936), 148.
- Gibás, A., 'A magyar óceánrepülés', *Aero Historia* (Aug. 1991), pp. 2-8.
- Gooch, J., *Mussolini and his Generals: The Armed Forces and Fascist Foreign Policy, 1922-1940* (Cambridge, 2007).
- Gosztony, P., 'The Collapse of the Hungarian Red Army', in Pastor, P. (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Col., 1988), pp. 69-79.
- Grosz, P.M., Haddow G., and Schiemer, P., *Austro-Hungarian Army Aircraft of World War One* (Mountain View, Calif., 1993).
- Gunston, B., *World Encyclopedia of Aero Engines* (Cambridge, 1989).
- Gyulai, I.E., *Honour and Duty: The Memoirs of Countess Ilona Edelsheim Gyulai, Widow of Vice-Regent Stephen Horthy of Hungary* (Lewes, 2005).
- Hajdu, T., *The Hungarian Soviet Republic* (Budapest, 1979).
- Hallion, R.P., *Taking Flight: Inventing the Aerial Age from Antiquity through the First World War* (New York, 2003).
- Hangodi, L., 'A M. Kir. Honvéd 4/I-es Nehézbombázó-Osztály története, 1936-1945', *HK 116/1* (Mar. 2003), pp. 144-163.
- Harvey, A.D., 'Bombing and the Air War on the Italian Front, 1915-1918', *Air Power History* (Fall 2000).
- Hauner, M., 'Military Budgets and the Armaments Industry', in M.C. Kaser and E.A. Radice (eds.), *The Economic History of Eastern Europe 1919-1975*, Vol. II (Oxford, 1985), pp. 49-116.
- Hetés, T., 'Gondolatok a magyar hadtörténet-felfogás alakulásáról', *HK 16/2* (1969), pp. 314-337.
- Higham, R., *The Military Intellectuals in Britain, 1918-1939* (New Brunswick, N.J., 1966).
- Hippler, T., 'Democracy and War in the Strategic Thought of Giulio Douhet', in Strachan, H. and Scheipers, S. (eds.) *The Changing Character of War* (Oxford, 2011), pp. 167-183.
- Holló, J.F., *A Galambtól a Griffmadárig: a magyar katonai repülés 100 éve* (Budapest, 2010).

- Horváth, Cs., 'A Magyar 2. Hadsereg Közelfelderítő Repülőszázadának működési rendszere a szabályzatok tükrében 1942 június-október', *HK* 107/2 (June 1994), pp. 101-127.
- Jeszenszky, G., 'Hungary through World War I and the End of the Dual Monarchy', in Sugar, P.F., Hanák, P., and Frank, T. (eds.), *A History of Hungary* (Bloomington, Ind., 1990), pp. 267-294.
- Juhász, B., 'The Inter-Allied Military Commission of Control and the Military Control of Hungary between 1921 and 1927', *Hadtudományi Szemle*, 5/1 (2012), pp. 47-72.
- 'Olasz-Magyar vezénylések és tanulmányutak a két világháború között', *HK* 125/1 (2012), pp. 133-174.
- Juhász, Gy., *Hungarian Foreign Policy 1919-1945*, trans. S. Simon and M. Kovács (Budapest, 1979).
- Kálmán, K., *A magyar vezérkari tisztek kiképzése és továbbképzése az 1920-1944 közötti években* (Budapest, 1992).
- Kasperek, J., 'Poland's 1938 Covert Operations in Ruthenia', *East European Quarterly*, XXIII, No. 3 (Sep. 1989), pp. 365-73.
- Kelemen, A., 'A bombázó iskolától az 1. önálló távol felderítő századig', *Magyar Szárnyak* (1981), pp. 57-9.
- Kennett, L., *The First Air War, 1914-1918* (New York, 1991).
- Kenyeres, D., *Kecskeméti katonai repülés története kezdetektől a Gripenig* (Kecskemét, 2006).
- Kerr III, J.L., 'Against All Comers: Operations of the K.u.K. Luftfahrtruppen', *Cross and Cockade Journal*, 15/4 (1974), pp. 291-356.
- Kertész, S.D., *Diplomacy in a Whirlpool: Hungary between Nazi Germany and Soviet Russia* (Notre Dame, Ind., 1953).
- Kistelegdi, E., 'A repülő akadémia története', in T. Rada (ed.), *A Magyar Királyi Honvéd Ludovika Akadémia és a testvérintézetek összefoglalt története*, II. kötet (Budapest, 2001), pp. 176-83.
- Knox, M., *Hitler's Italian Allies: Royal Armed Forces, Fascist Regime, and the War of 1940-1943* (Cambridge, 2000).
- Kováts, L., *Sólymok, Héják, Nebulók: A Magyar Kir. Állami Vas-, Acél-, és Gépgyárak Repülőgépgyárának tevékenysége 1936-1944* (Budapest, 1990).

- Kupiec-Weglinski, J.W., 'The Siege of Przemyśl, 1914-1915', *American Philatelist*, June 2012, pp. 544-555, <[http://stamps.org/userfiles/file/AP/feature/Feature\\_06\\_12.pdf](http://stamps.org/userfiles/file/AP/feature/Feature_06_12.pdf)>.
- Macartney, C.A., *October Fifteenth: A History of Modern Hungary, 1929-1945*, Parts I and II (Edinburgh, 1957).
- 'Hungary's Declaration of War on the U.S.S.R in 1941', in Sarkissian, A.O., (ed.) *Studies in Diplomatic History and Historiography* (London, 1961), pp. 153-65.
- MacIsaac, D., 'Voices from the Central Blue: Theorists of Air Power', in Paret, P. (ed.), *Makers of Modern Strategy from Machiavelli to the Nuclear Age* (Princeton, 1986), pp. 624-647.
- Meilinger, P.S., 'Giulio Douhet and the Origins of Airpower Theory', in Meilinger, P.S. (ed.), *The Paths of Heaven: The Evolution of Airpower Theory* (Maxwell AFB, Ala., 1997), pp. 1-40.
- Mócsy, I., 'Hungary's Failed Strategic Surrender: Secret Wartime Negotiations with Britain', in Dreisziger, N. (ed.) *Hungary in the Age of Total War (1938-1948)* (New York, 1998), pp. 85-106.
- Morrow, J.H., *German Air Power in World War I* (Lincoln, Nebr., 1982).
- 'Defeat of the German and Austro-Hungarian Air Forces in the Great War, 1909-1918', in Higham, R., and Harris, S.J. (eds.), *Why Air Forces Fail: The Anatomy of Defeat* (Lexington, Ky., 2006), pp. 99-134.
- Moys, P., 'Légiforgalmi irányításunk története (1920-1945)', p. 2, <[http://iranyitokepzes.hungarocontrol.hu/download/hungarocontrol\\_a-legiforgalmi-iranyitas-tortenete.pdf](http://iranyitokepzes.hungarocontrol.hu/download/hungarocontrol_a-legiforgalmi-iranyitas-tortenete.pdf)> accessed 6 Aug. 2013.
- Mulder, R., 'Magyar Aeroforgalmi Részvény Társaság - MAEFORT (1920-1921) and Magyar Légiforgalmi Részvény Társaság - MALERT (1922-1945)', <[http://www.europeanairlines.no/wp-content/uploads/2010/06/A\\_Maefort\\_Malert\\_020209.pdf](http://www.europeanairlines.no/wp-content/uploads/2010/06/A_Maefort_Malert_020209.pdf)> accessed 12 Sep. 2013.
- Nagy, V., 'A 3. Hadsereg átkelés a Dunán és Belgrád elfoglalása 1915 október 6-10', *HK* 3/1926, pp. 310-22.
- Nagyváradi, S., Szabó M.M., and Winkler, L., *Fejezetek a magyar katonai repülés történetéből* (Budapest, 1986).
- Neulen, H.W., *In the Skies of Europe: Air forces allied to the Luftwaffe 1939-1945*, trans. A. Vanags-Baginskis (Norfolk, 2005).
- Niehorster, L.W.G., *The Royal Hungarian Army, 1920-1945* (Bayside, NY, 1998).

- Nötel, R., 'International Credit and Finance', in M.C. Kaser and E.A. Radice (eds.) *The Economic History of Eastern Europe 1919-1975*, Vol. II (Oxford, 1986), pp. 170-295.
- Olasz, L., 'Jugoszláv légitámadások Magyarország ellen 1941 áprilisában', *HK* 117/1 (March 2004), pp. 167-203.
- 'Lépések a honi légvédelem kiépítésére Magyarországon az 1920-as években', *HK* 122/3 (September 2009), pp. 635-676.
- Ormay, J., 'Kassai bombák: Tárgyi bizonyítékok szemtanúk', *Magyar Szárnyak* (1982), pp. 86-90.
- 'Milyen gépek bombázhatták és milyen gépek nem bombázhatták Kassat?', *Magyar Szárnyak* (1984), pp. 46-58.
- 'A Bustyaházai incidens', *Magyar Szárnyak* (1984), pp. 68-72.
- 'Még egyszer a Kassai bombázásról', *HK* 105/3 (September 1992), pp. 131-4.
- Overy, R.J., *The Air War 1939-1945* (New York, 1981).
- *The Bombing War: Europe 1939-1945* (London, 2013).
- 'Air Power in the Second World War: Historical Themes and Theories' in Boog, H., (ed.) *The Conduct of the Air War in the Second World War* (Oxford, 1992), pp.
- Pagáts, P., 'Légitámadás Pécs és Siklós ellen', *Aero Historia* (August 1991), pp. 9-13.
- Palmer, S.W., *The Dictatorship of the Air: Aviation Culture and the Fate of Modern Russia* (Cambridge, 2006).
- Pastor, P., *Hungary Between Wilson and Lenin: The Hungarian Revolution of 1918-1919 and the Big Three* (New York, 1976).
- Péntek, R., 'István Horthy's Election as Vice-Regent', in Dreisziger, N., (ed.) *Hungary in the Age of Total War* (New York, 1998), pp. 73-84.
- Peszke, M.A., 'Poland's Military Aviation, September 1939: It Never Had a Chance', in Higham, R., and Harris, S.J. (eds.), *Why Air Forces Fail: The Anatomy of Defeat* (Lexington, Ky., 2006), pp. 13-40.
- Punka, G., *Hungarian Air Force* (Carrollton, Tx., 1994).
- and Sárhidai, Gy., *Magyar sasok: A Magyar Királyi Honvéd Légierő 1920-1945* (Budapest, 2006).

- Radice, E.A., 'General Characteristics of the Region between the Wars', in Kaser, M.C., and Radice, E.A. (eds.), *The Economic History of Eastern Europe 1919-1975*, Vol. I (Oxford, 1985), pp. 23-65.
- 'The Development of Industry', in M.C. Kaser and E.A. Radice (eds.) *The Economic History of Eastern Europe 1919-1975*, Vol. II (Oxford, 1986), pp. 416-51.
- Ránki, Gy. and Tomaszewski, J., 'The Role of the State in Industry, Banking and Trade', in Kaser, M.C., and Radice, E.A. (eds.) *The Economic History of Eastern Europe 1919-1975*, Vol. II (Oxford, 1986), pp. 3-48.
- Réti, Gy., *Hungarian-Italian Relations in the Shadow of Hitler's Germany, 1933-40* (Boulder, 2003).
- Révész, T., *Repülőtér az Alpokalján: A szombathelyi katonai repülőtér története* (Budapest, 2009).
- Romsics, I., *Hungary in the Twentieth Century*, trans. T. Wilkinson (Budapest, 1999).
- 'The Social Basis of the Communist Revolution and of the Counterrevolutions in Hungary', in P. Pastor (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Col., 1988), pp. 157-168.
- Rothenberg G.E., 'Military Aviation in Austria-Hungary, 1893-1918', *Aerospace Historian*, Vol. 16 (1972), pp. 77-82.
- 'The Habsburg Army in the First World War: 1914-1918', in Kann, R.A., Király, B.K., and Fichtner, P.S. (eds.) *The Habsburg Empire in World War I* (Boulder, Col., 1977), pp. 73-86.
- Rothenberg G.E., *The Army of Francis Joseph* (West Lafayette, Ind., 1976).
- The Round Table, 'Disarmament', *The Commonwealth Journal of International Affairs*, 22:87 (1932), pp. 532-551.
- Sakmyster, T., 'Army Officers and Foreign Policy in Interwar Hungary, 1918-41', *Journal of Contemporary History*, Vol. 10, No. 1 (Jan 1975), pp. 19-40.
- 'The Search for a Casus Belli and the Origins of the Kassa Bombing,' *Hungarian Studies Review* Vol. X, No. 1 (Spring, 1983), pp. 53-65.
- *Hungary's Admiral on Horseback* (Boulder, Col., 1994).
- 'Gyula Gömbös and the Hungarian Jews, 1918-1936', *Hungarian Studies Review*, Vol. XXXIII, Nos 1-2 (2006), pp. 157-168.

- Scott-Hall, S. 'The Sailplane Capabilities at the Wasserkuppe, 1935', *RAF Quarterly* 7/1 (Jan 1936), pp. 24-28.
- Sganga, R., Tripodi, P.G., and Johnson, W., 'Douhet's Antagonist: Amadeo Mecozzi's Alternative View of Air Power', *Air Power History* 58/2 (Summer 2011), pp 4-15.
- Sisa, A., 'A Magyar Királyi Honvéd Légierő olaszországi repülőgép-beszerzései', *HK* 115/4 (2002), pp. 1050-1083.
- Sondhaus, L., *Franz Conrad von Hötzendorf: Architect of the Apocalypse* (Boston, 2000).
- Stahel, D., *Operation Barbarossa and Germany's Defeat in the East* (Cambridge, 2009).
- Steiner, Z., *The Lights that Failed: European International History, 1919-1933* (Oxford, 2005).
- Stenge, Cs. *Baptism of Fire: The First Combat Experiences of the Royal Hungarian Air Force and Slovak Air Force, March 1939* (Solihull, 2013).
- Stone, N., 'Army and Society in the Habsburg Monarchy, 1900-1914', *Past and Present*, 33 (April 1966), pp. 95-111.
- Strachan, H., *The First World War, Volume I: To Arms* (Oxford, 2001).
- Sullivan, B.R., 'Downfall of the Regia Aeronautica', in R. Higham and S. J. Harris (eds.), *Why Air Forces Fail: The Anatomy of Defeat* (Lexington, Kentucky, 2006), pp. 135-176.
- Szakály, S., *A magyar katonai felső vezetés, 1938-1945* (Budapest, 2001).
- Szabó, M.M., *A Magyar Királyi Honvéd Légierő a második világháborúban* (Budapest, 1987).
- *A Magyar Királyi Honvéd Légierő, 1938-1945: elméleti-technikai-szervezeti fejlődése és háborús alkalmazása* (Budapest, 1999).
- Szabó, P., 'Hungarian Soldiers in World War Two: 1941-1945', in Veszprémy, L., and Királyi, B.K. (eds.) *A Millennium of Hungarian Military History*, trans. E. Arató (New York, 2002), pp. 441-84.
- Szakály, S., 'The Officer Corps of the Red Army', in P. Pastor (ed.) *Revolutions and Interventions in Hungary and its Neighbor States, 1918-1919* (Boulder, Co., 1988), pp. 169-78.
- Thompson, M., *The White War: Life and Death on the Italian Front, 1915-1919* (New York, 2008).

- Tökés, R., *Béla Kun and the Hungarian Soviet Republic* (London, 1967).
- Várdy, S.B., 'The Impact of Trianon upon the Hungarian Mind', in N. Dreisziger, (ed.), *Hungary in the Age of Total War (1938-1948)* (New York, 1998), pp. 27-48.
- Vas, Z., *Horthy* (Budapest, 1981).
- Vermes, G., 'The October Revolution in Hungary: From Károlyi to Kun', in I. Völgyes (ed.), *Hungary in Revolution, 1919: Nine Essays* (Lincoln, Nebr., 1971), pp. 31-60.
- Vesztényi, J., 'A Magyar katonai repülés 1920-45', *Magyar Szárnyak*, 4/22 (1993), pp. 205-24.
- Young, R.J., 'The Strategic Dream: French Air Doctrine in the Inter-War Period, 1919-39', *Journal of Contemporary History*, Vol. 9, No. 4 (Oct., 1974), pp. 57-76.
- Weinberg, G.L., *A World at Arms: A Global History of World War II* (Cambridge, 1994).
- Wheeler-Bennett, J.W., *The Disarmament Deadlock* (London, 1934).
- Woodhouse, J.R., *Gabriele D'Annunzio: Defiant Archangel* (Oxford 1998).
- Zeidler, M., *Ideas on Territorial Revision in Hungary, 1920-1945*, trans. T.J. and H. DeKornfeld (Boulder, Col., 2007).

#### Unpublished Theses

- Cain, A.C., 'Neither Decadent, nor Stupid, nor Treasonous', Ph.D. diss. (Ohio State University, 2000).
- Weaver, E., 'Revision and Its Modes', D.Ph. thesis (Oxford University, 2008).