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## GERMAN SPORT AVIATION AS A RESERVE OF MILITARY AVIATION IN THE INTER-WAR PERIOD

**Keywords:** aviation, sport, training, organisation

**ABSTRACT:** Aviation as a new weapon emerged at the beginning of the 20<sup>th</sup> century. The event that influenced its development was the course of the First World War. It was not the decisive factor in determining the fate of the war, however, its dynamic development in the final stage of the war could indicate its great importance in the future. The development of military aviation was the domain of the military authorities. The popularisation campaign and the development of appropriate flight training programs were entrusted to the civilian authorities. The establishment of appropriate organisations was needed to effectively engage the public in cooperation. Sport aviation and gliding excelled in preparing young people for service in airborne combat units and transport aviation. Their development in Europe in the inter-war period proceeded in two ways.

The first was the creation of organisations by administrative orders, which took place in Germany, Russia and Italy. The second was the skilful use of social initiatives linked to aviation interests, appropriately coordinated by the state and supported by subsidies, as was the case in England and France.

The purpose of the establishment of these organisations and activities was to popularise and train aviation in the widest circles of society and to prepare it for a possible airborne threat.

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## PARAMILITARY AVIATION ORGANISATIONS

The Treaty of Versailles prohibited the German state from having military aviation. However, since the end of the war, civil aviation, communication societies and sports aviation organisations had been active in Germany. These popularised aviation and provided the natural background for the future development of military aviation personnel (Cynk, 1989, p. 103).

In 1926, a treaty was signed in Paris abolishing almost all technical restrictions on German aviation and giving Germany the opportunity to build aircraft that were technically no different from military aircraft.

Germany's aviation restrictions were based on the clauses of the Treaty of Versailles (Lufthansa, 1934, p. 171), later supplemented by the decisions of the Council of Ambassadors of 14 April 1922 specifying what technical features qualified an aircraft as military equipment (Cynk, 1989, pp. 101–103; Królikiewicz, 1961, pp. 200–203). The ban on the construction of aircraft that could fly without a pilot and the ban on armouring and arming aircraft remained in force. With regard to training for sporting purposes, Germany undertook not to provide subsidies from the fund of the government, countries and municipal associations. Subsidies could only be given for communication aviation.

Germany was given the right to install 4 larger airports and 12 smaller airfields for transport aviation purposes in the demilitarised zone (Aviation of Germany, 1929, p. 50). Reservations on the construction of airports and airfields in the rest of the country were not specified in the agreement. The government took control of communications aviation, aircraft construction and aviation education. The Ministry of Communications was the chief executive authority in this area. Within the ministry, aviation matters, were handled by an independent aviation division. Its scope of activities included the supervision of civil aviation, the subvention of traffic aviation, safety, the promotion of aviation knowledge, the maintenance of the Central Pilot School (Deutsche Verkehrsfliegerschule) and its branches. The organ of the aviation department was the 'Zentralstelle für flugsicherung'.

The ministry had an advisory body, the Aviation Council (Beirat für Luftfahrtwesen), whose members were appointed by the minister from

among the representatives of the various aviation associations. The Council's task was to give an opinion on the Ministry's aviation regulations.

Regional aviation matters were handled by the national governments themselves. These were mostly centred in the Ministries of Trade (e.g. Prussia) or Interior of the individual Länder. The activities of the states mainly included field organisation and local air communication.

In addition, the German aviation had a supreme sports and aviation authority, "Der Deutsche Luftfahr". The Council consisted of representatives of the following organisations: Wissenschaftliche Gesellschaft für Luftfahrt, Verband der Luftfahrzeugindustrieller, Deutsche Luftfahr, Aeroclub von Deutschland. Der Deutsche Luftfahr exercised the sporting authority and its scope of activities included: the organisation of aviation competitions, the supervision of private aviation education.

The development of German aviation could not take place without subsidies from the state and municipal associations. State financial aid covered all areas of aviation. The aviation budget increased by 431% between 1924 and 1930. A large part of the expenditure was allocated to the subsidy of air transport companies, above all Deutsche Lufthansa (X years of German transport aviation, 1929, p. 408; Jungrow, 1936, p. 306). Regardless of financial support from the government, aviation benefited from subsidies from the provincial states and cities (for example, in 1926 it received 20 million marks from these sources). The financial support of the cities also manifested itself in the form of shares in air transport companies, the airport society, as well as in the form of direct subsidies to schools, institutions and factories.

The progress of German aviation in the construction and technical fields, was due to the highly qualified personnel and cultivated in institutes and universities, the scientific research on aviation. The importance of the Wissenschaftliche Gesellschaft für Luftfahrt e.v., founded in 1912 and based in Berlin, should be emphasised. Its aim was to promote aviation in the theoretical and practical fields. The society's activities included scientific lectures on aviation, the publication of the professional journal "Zeitschrift der Wissenschaftlichen Gesellschaft für Luftfahrt", the organisation of competitions for scientific papers and the subvention of experiments. The Society had its delegates in the German Aviation Coun-

cil (Der Deutsche Luftfahrt), and members of the Aviation Council at the Ministry of Transport were recruited from its ranks.

German sport aviation was managed by “Der Deutsche Luftfahrt”. This institution was not directly subordinate to the state authorities, but nevertheless cooperated closely with the government in the field of military aeronautical training.

Until 1926, military aeronautical training was carried out by several aviation organisations. Pilot training was conducted to a limited extent in the Ring der Flieger association, the training of new pilots took place in the ‘Sportflug’. In addition, there were a number of other aviation associations, but due to the dispersion of efforts, the number of newly trained pilots was small. The unification of the aviation associations into one union was one of the most important and most difficult tasks of the government. The government allocated more than 5 million marks for sports aviation and, as part of this, for military aviation training.

In order to create a single, large aviation organisation, the government first had to overcome the difficulties of the individual Länder, as not all of them agreed to centralisation. Some concessions were made to the Länder (especially Bavaria) by granting special privileges. The Deutscher Luftfahrt Verband was entrusted by the German government with all matters relating to military aeronautical training. This association brought together former pilots and people interested in aviation. It was the most numerous and best organised aviation association. Ordinary members of the DLV were aviation academic unions (Wefeld, 1994), and correspondent members included:

- Reichsverband der Lehrer zur Förderung des Motorlosen Fluges,
- Deutsche Luftfahrt G.m.b.H.,
- Ring der Flieger,
- Deutscher Modell-Segelflug Verband.

The association worked closely with the ‘Aeroclub von Deutschland’.

The Reich government’s accession to the DLV took place through the creation of the organisation Deutsche Luftfahrt G.m.b.H., de nomine, as a correspondent member, de facto as the head of the DLV. The association Deutsche Luftfahrt G.m.b.H. was established to better coordinate the

training of sport aviators and to attract the broad, indigent strata of German society to aviation (Babinski, 1930).

The Deutsche Luftfahrt G.m.b.H. took over all the agencies and facilities of the Sportflug Society, took control of military aeronautical training, ran courses and flight schools and training workshops. Funding came from the Ministry of Communications, collections and public contributions. The activities of the society produced good results in the field of military aeronautical training.

In January 1933, the German government established the Ministry of Aviation, headed by General Hermann Göring. During the First World War, he was a captain pilot – the ace of the German Air Force with 22 victories (German Aviation under Hitler's Flag, 1933, p. 143; Further Expansion of the German Aviation Authority, 1934, p. 174; R. Michulec, 2011, p. 28).

On 25 March in Berlin, at a meeting of the boards of the Deutsche Luftfahrt Verband, the Rhön-Rossitten Gesellschaft, the Aeroclub of Germany and the 'Flieger Korps', a new aviation organisation, the Deutsche Luftsport Verband, was established (New Organisational Forms of German Hang-gliding Sport, 1933, p. 183). Bruno Lorzer became president, Bauer de Betaz and Gerard von Hoepfner as deputies. The subsidiary body was an advisory senate consisting of persons appointed by the minister. The principles, objectives and tasks of the hitherto disparate societies were made uniform, and the entire organisation of sports aviation was placed under a single management, with all chief and management positions being filled by former wartime military aviators according to an established hierarchy. Germany was divided into 16 territorial sports groups corresponding to the regional provinces (Handful of impressions from Germany, 1934, p. 169). The group (Fliegerlandgruppe) was headed by a manager appointed by the Air Force minister. These groups were subdivided into sub-groups (Untergruppen), and the latter into squadrons or air squadrons. The groups included gliding and balloon units, aviation, schools and courses, airfields with staff, workshops and support services. Members of the DLV were properly uniformed, subject to military discipline, and received military training in addition to airborne training as part of their military training.

The extent of state influence on the hitherto independent sports aviation organisations was increasing. A semblance of independence was maintained by the Aeroclub of Germany, being the de facto social representation of German aviation at home and abroad. There was also a centralisation of German aviation magazines (*What's New Abroad*, 1934, p. 29). Itinerant air exhibitions played an important role as part of aviation propaganda (*Aviation and German Youth*, 1936, p. 29). Another form of the dissemination of aviation knowledge was the 'Weekly Aviation Propaganda' (A. Wojdyga, 1924, p. 296). In order to realise the slogan "Germany must be a nation of aviators", in 1935 the German government introduced the subject of aviation into the compulsory curriculum of secondary schools and universities (*German Air Sports*, 1934, p. 95). Aviation sport training was geared towards improving group interaction skills (Krzyzan, 1988).

In 1937, the *Deutscher Luftsport Verband* was replaced by the *Nationalsocialistisches Fliegerkorps (NSFK)*, headed by General Friedrich Christiansen, a German aviation ace from the First World War. The NSFK carried out tasks beyond the realm of sport aviation, being in fact a volunteer unit of the aviation military service.

The members of the NSFK were volunteers aged 15–18 recruited from the *Luftsportscharen, Luftsportgefolgschaften der HL*. The whole country was divided into NSFK-Landesgruppen (corresponding to air districts). The commanders of the Landesgruppen were old aviation officers. The Landesgruppen were divided into *Ortsgruppen* (local groups) and *Stützpunkt* (i.e. support units). The number of Landesgruppen varied, reaching up to 40 members. The Landesgruppen included motorsport, gliding and ballooning as well as modelling. The aviation sport had state gliding schools, district gliding schools, gliding camps, practice areas and a research centre (at the *Deutsche Forschungsanstalt für Segelflug*) in Harmstad.

The sport aviation thus reorganised survived until 1939.

## FLIGHT TRAINING

Deutsche Luftfahrt G.m.b.H. was in charge of military aviation training. This training consisted of four stages: stage I - aviation 'kindergarten', stage II - aviation education and stage III - aviation training. Training in the first period was decentralised and conducted in courses at the individual aviation associations or at the "kindergarten" aviation schools and in courses of the Deutsche Luftfahrt G.m.b.H. Education in the second stage took place at the pilot schools of the Deutsche Luftfahrt G.m.b.H. or at other aviation schools. Flight training was decentralised and conducted at flight schools, if there were any in the locality, or in their absence at DLV training points. Students who could not be trained on aircraft received training on gliders. Glider training also comprised 'kindergarten', proper training and practice stages, the difference being that not only training but also further practice was centralised.

One of Germany's main efforts was directed at creating a large number of aviation personnel. For training and coaching, the Ministry of Communications allocated 5 million marks between 1926 and 1929. Significant money in the form of unofficial schooling allowances was also channeled through Lufthansa. Pilot training and education took place at 17 flight schools, including: Albatros, Flugzeugwerke G.m.b.H. Berlin; Aero Sport G.m.b.H. Warnemünde; Bäumer Aero G.m.b.H. Hamburg; Deutsche Luftfahrt G.m.b.H. Böblingen; Königsberg; Deutsche Verkersfliegerschule G.m.b.H.; Stettin; Warnemünde; Kassel; Köln; Düsseldorf.

The flight schools were divided into private and state schools. Among the state schools was the communications flight school (Deutsche Verkehrsfliegerschule). The Deutsche Luftfahrt G.m.b.H. military training schools also had the nature of state schools. These schools had a military character, the pupils were in barracks and the lecturers were aviation officers. Other centres remained in private hands. Most of these schools belonged to aviation factories, e.g. Raab Katzenstein, Focke Wulf.

Pilot training comprised three stages of training: up to Grade A, up to Grade B and up to Grade C. The training of mechanics (Flugzeugwerte), on the other hand, was conducted in the workshops of aircraft factories

and airline companies. Airframe mechanics (Bordwarte) were trained only at the DVS.

The Deutsche Verkersfliegerschule played an essential role in the pilot training process. Only German citizens were admitted to the school. In addition to civilians, military personnel were also admitted. Foreigners were admitted, with the permission of the Ministry of Communications. In addition to general lectures, the military also attended specialised training. Candidates had to have an appropriate education and were required to submit the relevant documents, including a sports course certificate and a medical certificate, before being admitted to the school. Education at the DVS lasted a maximum of four years and was conducted with the aim of training pilots up to grade 'C' (the highest).

Apprentice locksmiths and mechanics of other specialities were accepted as candidates for aircraft mechanics. The duration of the training was three years. The programme included training in the specialities of mechanic, aircraft mechanic and radio operator. Practical training for future engineers was intended to deepen their knowledge of aviation equipment.

Irrespective of the training of flying personnel, Germany aimed to train a large staff of engineers and to expand scientific and technical facilities. Many colleges, e.g. the Technische Hochschule in Aachen, Berlin, Breslau, Darmstadt and Hummer, had aviation departments or held lectures on aviation.

## GLIDING

The development of aviation training yielded the best results in gliding training (Chorzewski, 1979, pp. 120–125). The government of the Third Reich made every effort to ensure that the sport stood at the highest level. The Ministries of Communications and Education, in consultation with the Ministry of Industry and Trade, provided large subsidies for the development of gliding. The Ministry of Education issued a decree introducing the study of aviation into school curricula. The aim was to familiarise young people with the scientific and technical principles and methods of aviation training through the use of practical experience in aircraft con-

struction. This was to be achieved by holding science lectures on aeronautical topics in general schools, by arranging special courses, and by organising glider flights in leisure time. These undertakings were carried out by the Deutscher Luftfahrt Verband together with national and local aviation associations. Some schools, including the Hochschule für Leibesübungen, introduced gliding into their curriculum, and the Deutsche Reichsausschuss für Leibesübung made the awarding of the sporting gymnastic badge conditional on the fulfilment of the conditions stipulated in gliding training.

In the first period, glider training in Germany was decentralised. However, it soon became centralised and was conducted at the following training centres in: Rossiten, Grünau, Jena and Wangen.

In 1929, gliders were affiliated to 263 clubs of the Deutscher Luftfahrt Verbands. During this period, 643 gliders were constructed, 1,000 a year later. 22 gliding sites were established, while around 7,000 people were trained as gliders.

The successful development of German gliding was also fostered by the annual Rhön gliding competition and the very numerous regional competitions (15<sup>th</sup> Rhön gliding competition, 1834, pp. 220–222; 16<sup>th</sup> Rhön gliding competition, 1935, pp. 200–205).

Academic aviation associations played a major role in popularising gliding (Germany. Regional gliding competitions in Württemberg, 1931, p. 324; Gliding, 1931, p. 145; Germany. Gliding, 1931, p. 185). The scientific side of gliding was handled by the German Gliding Research Institute (Kochanski, 1935, pp. 175–177). In order to carry out scientific and technical research on the behaviour of gliders in different atmospheric (thermal) conditions, German teams participated in high mountain expeditions (e.g. in the Andes) in gliding (Hirth, 1934, p. 442).

In 1933 the gliding sport, concentrated in 2,500 flying circles and with 3,000 gliders, was subordinated to the Deutsche Luftsport Verband. In order to train the maximum number of gliders, some schools in Hohenberg and Grünau, among others, provided training throughout the year (Perini, 1937, p. 1105). The strenuous work yielded tangible results and so, between 1936 and 1937, 30,000 gliders were trained, of whom 9,000 held cat “C” and 2,000 cat “B”.

As a reflection of the state of training and flying skills, Germany organised the First International Gliding Competition (Henneberg, 1937, p. 1460–1463). In the field of gliding, in terms of the number and quality of personnel as well as the quantity and quality of the equipment owned, Germany ranked first in the world.

## CONCLUSION

The organisation and activities of aviation in Germany during the period presented were carried out within the framework of military aeronautical training. It was a compromise between the interest of youth, the financial possibilities of the state and defence needs. The principle that was pursued was to inspire young people with aviation matters, which were included in the rigid framework of sports and paramilitary organisations. In fact, it was a conscious activity of the Third Reich authorities to prepare aviation cadres for future tasks in military aviation.

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