

”WHITE” MILITARY ARCHITECTURE IN FINLAND, 1926–1939

The Finnish Defence services were established under exceptional circumstances in 1918 as the army of the legal Government of a country involved in civil war. This was the basis on which Finland built up its military forces during the inter-war period. In addition to developing the various branches, the housing and medical care of the conscripts and regular staff were also organised. Architectural means were also harnessed to promote the health and combat fitness of the conscripts. The construction activities and the buildings – barracks, refectory buildings, canteens, hospitals, Air Force facilities – and the respective architecture reflect the military political situation of the country as well as the values and objectives of the defence services and society in general. From 1926 onwards, the buildings of the defence services were planned by the Construction Bureau of the Technical Department of the Ministry of Defence, one of the largest architects’ studios of the 1930s in Finland. The studio employed an exceptionally large number of female architects. This study focuses on the architecture of the defence services – on barracks, hospitals, airport areas and the Helsinki Military Academy – and on the respective designers, the tenure architects, as well as on the meanings and messages conveyed by the military architecture of the First Republic. In my work, I look at architecture as a medium which had a shared function with the cinema, photography and literature to assist the defence services in their enhancement of the defensive will of the citizens. The objective of the study is to incorporate military architecture in the history of Finnish modernism, a domain from which it has hitherto been excluded.

As a consequence of the Civil War, the independent Finland was divided in two: the victorious white, bourgeois Finland and the red labour-class Finland of the defeated. The mental and political atmosphere of the official, white Finland of the 1920s and ‘30s can be described by the nationalistic ideology. The ideology unified the right-wing circles across the entire political field. A vital part of the ideology was the demand for national security and enhanced political strength. The external enemy was the Soviet Union, the communist ideology it was propagating and its possible expansion into Finnish territory. Internally, the Finnish Communist Party and the left-wing radicals were considered by right-wing circles to pose a threat to Finnish independence. The so-called Communist laws adopted by Parliament in late 1930 made it virtually impossible for the left-wing radicals to operate in public. Although recognised as legal representatives of the working class, the Social Democrats were also looked upon with suspicion by some of the right. However, the explicit distance taken

by the Social Democrats from Communism and their increasingly positive attitude towards defence issues in the mid-1930s contributed to a national consensus and made it possible to increase the defence budget.

As a reaction to right-wing radicalism, to the years marked by the extreme right Lapua movement and by incidents such as the right-wing rebellion attempt in Mäntsälä, the front for legality strengthened between 1933 and 1935, resulting in increased influence gained by the political centre on internal affairs and in the defeat of the extreme right. The direction was opposite to the development taking place in continental Europe and the Baltic countries, alienating Finland politically from these countries. Instead, there was a clear rapprochement of Finland towards the Scandinavian countries. Adopted unanimously by Parliament in 1935, the declaration on the Nordic orientation has been interpreted as an enhancement of democracy in Finland. In fact, the Nordic orientation was adopted as Finland's official foreign policy doctrine.

In the context of the defence plans of the independent Finland, the Soviet Union was almost the only potential enemy. The most probable venue of war was the Karelian isthmus, where the conscript army was in desperate need of new quarters. The country had garrisons dating from the time of Russian rule, but they were in wrong places strategically, and the buildings were in poor condition. The first Finnish garrison areas were built in the 1920s in Kiviniemi, Terijoki and Valkjärvi. Air bases with appropriate airfields and buildings were built for the new branch of the military services, the Air Force, and the Air Academy was established in Kauhava. The Finnish war munitions industry was established in the 1930s. A cannon factory with its respective housing area was located in Jyväskylä, the aircraft factory and the aeronautics depots in Tampere and the ammunition works in Kuopio – each of them deep in the country, out of the then operative reach of the planes of the assumed enemy, the Soviet Union. A network of regional depots was constructed to facilitate and accelerate eventual mobilisation. The increase in the defence budget was directly reflected in the number of construction projects. (Map. Geographical distribution of the major construction projects of the Ministry of Defence in the 1920s and '30s p. 60.)

The planning of the defence buildings, previously the responsibility of the General Board of Public Buildings, was in practice taken over in 1926 by the Ministry of Defence; in 1926–1939, most of the new buildings and refurbishment projects were planned by the Ministry's Technical Department, the Construction Bureau. The projects assigned to the Bureau in the 1930s were notable both quantitatively and architecturally.

As a result of the permanent status granted to the defence services and the Ministry of Defence in 1928, civil servants and tenure officials were also appointed to the Construction Bureau at the Ministry's Technical Department. Engineer-Colonel and Architect Torsten Erik Elovaara (1890-1949) was appointed as the Senior Architect, initially as the Head of Bureau and later as the General Director. The second tenure architect's post was held by Niilo Niemi (1889–1954), whose responsibilities at the Construction Bureau included restoration projects and maintenance. There were also three engineers' posts. In 1938, one new tenure architect's post was created, and Olavi Sortta (ex

Sahlbom) (1896–1968) was appointed to it. In that year, there were six engineers with permanent posts. The rest of the personnel, both architects and engineers, were hired on a temporary contract basis.

The number of the personnel involved in planning increased after 1932. The number of architects reached a peak between 1935 and 1938, 14 architects on an annual basis. This was also the most intense construction period, due to the increases in the defence budget. During the years 1928 to 1939, a total of nine female and 13 male architects worked at the bureau, headed by Torsten Elovaara. (Tables 1 and 2 p. 64 and 66.) The female architects could not hold any permanent tenures or offices; although an act had been adopted in 1926 according to which women were eligible for civil service, the defence services and Ministry of Defence tenures and offices were still off-limits for women. However, they were eligible for extraordinary employment contracts.

The Construction Bureau was a planning collective with the architects and engineers working as anonymous civil servants. In addition to Torsten Elovaara, who worked there for 29 years, Elsi Borg (25 years), Olavi Sortta and Kalle Lehtovuori (1889-1956) (30 years) and Elis Hyvärinen (1899-1976 (22 years) performed their "life-work" at the studio. The ministry was not only in charge of planning and construction but also building maintenance and repair operations. The barracks maintenance districts and their building engineers were directly controlled by the ministry.

The work at the Construction Bureau was divided by gender so that most of the woman architects' projects involved domains that were considered to be feminine: dwelling, nursing and care, gardening. On three occasions, women were assigned the task of planning barracks. The first was the "Castle" building group by Elsa Arokallio at the Kauhava Air Academy towards the end of the 1920s, followed by the Helsinki Motor Transport Company barracks by Martta Martikainen (1934–35) and the Ristiniemi Naval garrison by Kyllikki Halme (1937). All the above planning projects coincided with an active building cycle, with several major projects underway at the ministry.

The planners at the Construction Bureau formed a team, the assignment of which was finalised by the defence services. The architects were experts whose competence was relied upon by the final user and the constructor. The planners defined the architecture of the building, however, with respect to the framework set by the assignment. By virtue of their profession, the architects were free to use their own aesthetic judgement to plan the architectural framework required by the user for the operations that were to take place in the premises. In fact, they applied the latest architectural ideas to the needs of the defence services.

The Modern Barracks

Several sanatoriums were established in the 1930s to fight tuberculosis, which was a widespread disease in between the wars Finland. TB was also a major healthcare problem for the defence services in the 1920s and early 1930s. Large numbers of conscripts were disqualified due to discovery of the disease at

conscript medical examinations, this jeopardised the defence capacity of the country. In fact, the prevention of TB and epidemics became the most important reason for improving the conditions of the conscripts, to build new and repair the old barracks.

”Light, air and sun” were the means preferred by the functionalist urban and housing planning for the prevention of TB and other epidemics. In urban planning, the architectural measure was to open the closed blocks and turn them into parallel slab-block or semi-detached house groups, so that the healing sunshine could reach the living quarters. In individual buildings, maximum access to light was achieved through the orientation of the rooms and an increase in window area. Functional separation of different spaces, as well as easily cleaned, dust-repellent and light-reflecting shiny surfaces were also used in the pursuit of healthier architecture.

In 1934 and 1935, the Ministry of Defence architect Niilo Niemi published two articles in *Sotilashallinnollinen Aikakauslehti* (”Military Administrative Periodical”) on the planning of barracks, verbalising the concepts that had influenced the planning. Architect Niemi defined the new barracks building type developed in Finland, saying that the type was not about ”barracks built according to duplicated standardised drawings, as built by the Russians in their time, but buildings constructed as military quarters, based on a definite basic idea and planned according to established norms.”

The quarter unit of a modern barracks was a company, divided into rooms suitable for 18–20 men. In stone buildings, one floor was reserved for a company whereas in a wooden building, the entire building was allocated to one company. The floor plan of the barracks was based on side corridors. According to the 1919 act on military quarters, the calculated room space was 4 m² or 13 m³ per man. Moreover, each floor had the so-called hygiene room group, i.e., the washing rooms, toilets and a drying room. The toilet seats were placed in a row, with no partition walls between the seats. This was partly due to the notion that this was the easiest way to keep the place pure and clean. In other words, the men were watching over each other, and the sergeant-major over the men. The function of the corridor on each floor was to allow lining-up and formation exercises during bad weather as well as to provide room for the men off-duty. The demands set for the space were: exposure to light, airiness and a feeling of space as well as easy airing. Architect Niemi wrote about the barracks interior as follows:

”The ‘Neue Sachlichkeit’ of the modern barracks was complemented and characterised by the internal construction-technical treatment of the building. Everything was to be hygienic: direct and even; matter-of-fact: functional and durable; elegant: simple but not ascetic.”

Behind the ”norms” of barracks planning, we find the conventions of military and other institutional buildings, such as hospitals and TB sanatoriums in particular; for example, the late 19th century quarters of the sniper battalions in

Finland and the early 20th century barracks in Sweden. The floor plan based on the side corridor was considered to be a "Finnish" solution, since the barracks of the Finnish military or the so-called "old force" sniper battalions planned in the late 19th century had a similar floor plan. During the years 1926 to 1939, the Construction Bureau of the Ministry of Defence planned 32 barracks for the ranks in total. (Appendix 2) This number includes the Army, the Naval and the Air Force barracks as well as those for the Centre for Refresher Courses. The majority were white-plastered, stone-built functionalistic buildings.

The functionalistic vocabulary of form characterised by "*Neue Sachlichkeit*", the spatial organisation and the details of the Helsinki Motor Transport Company barracks, designed by Martta Martikainen in 1934, reflect the new planning principles. Moreover, the plan also realised all the "norms" and the characteristics of a modern barracks. Immediately upon its completion, the building was presented to the press which noted its "beautiful and purposeful style", the practical details of the fixed furniture as well as the young female architect who had planned the building. (Photos 17–19.)

Planned by Kalle Lehtovuori, the Niinisalo Refresher Course Centre was completed in 1935. The large rooms for 80 men were placed along a side corridor. The service facilities, excluding the toilets, were next to cylindrical staircases. The load-bearing structures comprised not only the brick outer walls but also a reinforced concrete pillar-and-beam structure which made large open spaces possible. The maximum accommodation capacity of the barracks, calculated on the basis of 8 m³ per man in bunk beds, was 3,600 men. Due to the tight budget, the barracks had no doors between the rooms and the corridors. The windows were standardised. A number of windows were placed side by side as dictated by requirements. Not only purposefulness but also the scarce budgetary possibilities conditioned the planning of the building. Economy was given a higher priority than hygiene.

The barracks, as well as the other buildings in the area, were examples of extremely ascetic architecture, characterised by evenly plastered, non-decorated white facades, cylindrical staircases, division of the various functions into separate areas and standardised building elements, such as windows and steel-tube railings. The model for this architecture can be detected in the German and Dutch municipal housing architecture of the 1920s, the so-called *Siedlung* architecture.

The defence services, "the men's school", educated the male members of society in patriotism, discipline, order, hygiene, cleanness and morals – into soldiers and proper citizens. It exercised "bio-power" to model the conscripts into healthy, disciplined, defence-minded and fit soldiers. The architecture created the framework for the education and exercise of this power. The architecture as a whole, its ascetic and hygiene-oriented nature, space solutions, and control, were at the service of military education.

Military Hospitals

The medical care of conscripts and permanent staff was organised in the 1930s. Two central military hospitals were constructed, one in Vyborg and the other in Helsinki. The new garrisons had smaller hospitals, a total of nine buildings constructed between 1926 and 1939.

The decision to build the Vyborg military hospital was taken by Parliament in 1928. Headed by Torsten Elovaara, architects Elsi Borg and Olavi Sahlbom (Sortta) planned the hospital during the years 1929–1931. The patient and procedure wards of the Vyborg military hospital were placed in separate wings, with the vertical traffic in the middle. It was typical of hospital planning of the 1930s to separate different functions. The use of lifts made it possible to construct increasingly tall buildings, with the service traffic becoming vertical, instead of horizontal as had been typical of the pavilion system.

The Helsinki military hospital Tilkkä, designed by architect Olavi Sortta was completed in 1936. The basic architectural solution of the Tilkkä hospital is the same as in Vyborg.

The Vyborg and Helsinki military hospitals were public, state-owned buildings, distinctive elements in the cityscape due to their height and location. However, their facades were not similar. The pylon-like entrance facade of the Vyborg military hospital was highlighted by Finnish national emblems, the lion relief decorations designed by Gunnar Finne. The decoration of the building was influenced by its position in the medieval border town of Vyborg. The emblem decoration conveyed the message of an important Finnish state building at the border of the fatherland – the gateway between East and West. In this way, the Vyborg military hospital finds a place among the long tradition of portal buildings, such as the Suomenlinna Kings' Gate (Photo 29.)

The facades of the Tilkkä hospital are ascetic. The dominant part of the building was the split cylinder-shaped gable of the patient's ward wing to the Southeast, encircled by balconies on every floor. At the time of its completion, this balcony solution was unique in Finland. The rounded gable of the high part of the building, seen in the Vyborg hospital draft drawings but never built, was now implemented in the Tilkkä hospital. (Photo 30). The form and location of the balconies was determined by the compass – the balconies were in the sun from morning till night. In the Tilkkä facades, there was nothing similar to the lion emblem decoration of the Vyborg hospital main entrance, symbols referring to the military. Indications of the military function of the Tilkkä building were the relief decorations in the entrance hall: the "Fight between Good and Evil" by architect Ragnar Ypyä, employed by the Ministry of Defence, and the "Horsemen" – two copies of a funerary memorial of the 1918 war, designed by Elias Ilkka and Erik Bryggman. (Photos 30–33.)

The events in the "Fight between Good and Evil" relief took place in three phases: peace, mobilisation and the fight against the dragon. The middle part of the work illustrated Finland's most recent war material. The motif of the relief was inspired by the legend of St. George and the dragon. The youth, first

leaning against his sword and then with sword held erect– St. George – is a symbol of the Finnish Army, and the dragon is the enemy threatening from the East, the Soviet Union and the communism that it was propagating. The message conveyed by the two gilded "Horsemen" relief works is respect for the achievements of the white Finland in 1918 as well as the veneration of the heroes of that war. The relief decoration of the Tilkka entrance hall was an illustration of the Finnish defence ideology of the 1930s, serving, in their time, to form attitudes and to disseminate that ideology.

The military hospitals and barracks were planned in the 1930s to meet the demands of contemporary medicine. Through its concern for the healthiness of the conscripts' quarters, the defence services wanted to contribute to national health and thereby to the defence capacity of the country. During the inter-war period, Finland had scarcely sufficient population resources to meet the demands of the conscript army. Therefore, the development of national health became an important objective from the point of view of defence.

Airforce Areas

Aeroplanes, cars and ocean liners became symbols of modernity in the 1920s. The aeroplane made it possible to see cities and population centres with "a bird's eye", which became the new dominant perspective. The aeroplane was also associated with fear – the threat from the air – which had an impact on town planning and placement of strategically important buildings. The air forces assumed international importance in the 1930s. France, the UK and Germany – after the rise of Hitler – allocated substantial sums to the development of their Air Forces.

In Finland, the construction of the Air Force areas started during the latter half of the 1920s. The status of the new military branch and the defence will of the people were enhanced through propaganda during the 1930s. With the help of the defence forces and the voluntary defence organisations, Erkki Karu directed the film "*Meidän poikamme ilmassa – me maassa*" (Our sons in the air – we on the ground) for the production house *Suomen Filmiteollisuus Oy*. Air shows were organised in every part of Finland, and aviation defence associations actively promoted the voluntary defence will of the people.

Seven new air bases were established in the inter-war era (Las 1 Utti, Las 2 Santahamina, Las 3 Sortavala, Las 4 Turkinsaari, Las 5 Suur-Merijoki, Las 6 Immola, Luonetjärvi), as well as the Airforce Academy in Kauhava. The areas were also provided with the necessary buildings and airfields, except for those places where the planes landed on water. The buildings in Immola as well as those of the Luonetjärvi air bases, finalised at the brink of the Finnish Winter War, were implemented on the basis of the exact same plans. The Air Force areas reflect the principles of barracks area construction of the 1920s and '30s, as well as the respective change along with the new contemporary town planning ideology and changes in arms technology. The axial composition was

replaced by a decentralised layout, with the buildings scattered over a wide area. The architecture reflects the change of the classicism of the 1920s (the Kauhava Airforce Academy) into functionalism (Immola).

Air base number 6 in Immola was built very rapidly (1935–37) and completed without a break. The result was architecturally uniform, despite the plans being drawn by many architects. The buildings in the area were characterised by a functionalistic vocabulary of form, uniform standardised building elements, carefully designed details and interiors as well as decorative motifs associated with the utilisation of the area. The new architecture, functionalism and technology, especially aeroplanes, conveyed the message of modernity. A new architecture which was adapted to the local climatic conditions, construction methods and materials, became established in the Finnish airforce buildings, the military branch which used the most recent technology. In fact, Immola air base is an excellent example of the military functionalism of the 1930s created by the Construction Bureau of the Ministry of Defence (Photos 58–75.)

The Santahamina Military Academy

The construction of the Military Academy was linked to the 1940 Olympic Games, assigned to Finland but cancelled due to the war. The construction decision was taken at a rapid pace, and the construction work was launched in 1939. The buildings were to be used as quarters for the athletes participating in the Olympic Games, while the swimming pool was intended for training purposes. The model was the Berlin 1936 Olympic village, taken over by the German defence forces after the games. Olavi Sortta planned all six buildings of the Academy (school, refectory, course building, barracks, officer housing building and stables) in 1939. Constituting a remarkable finale, the Military Academy concludes the period in which the Ministry's own Construction Bureau drew the plans for the Ministry of Defence. After the war, most of the defence buildings were planned by private architects' studios while the role of the ministry became that of a controlling body.

Including the white functionalistic buildings planned for the 1940 Olympic Games, the Military Academy constituted the representative architecture which was to make Finland known to the world as a modern (sports) state. The Malmi shooting range, a venue for international sports events and the Santahamina Military Academy were not only to represent Finland but also the country's modern defences. The symbolism of the decoration used in these buildings alluded to the State and the army, not to sport. In Germany, the Berlin Olympics had become, on the order of Hitler, a national project to display the national-socialist state and its ideology to the rest of the world. The implementation of the 1940 summer Olympics became a national effort for Finland, backed by both Parliament and the cabinet. It was a project that brought together the defence forces and the progressive co-operative movement, i.e., the Haka

construction co-operative, to work for a shared objective. Likewise, after a varied course of events the two nation-wide sports organisations, the right-wing SVUL and the labour movement TUL, ended up collaborating in the preparations for the Helsinki Olympics.

During the first half of the 1930s, modernism became the established vocabulary of form in Finnish military buildings, modernism which was adapted to serve nationalistic pursuits – just as in Italy – and represent the modern state. The decoration of the buildings also played an important role in this sense. The emblems, martial pictures and relief decorations: more or less abstract military helmets, state heraldry and arms were the decorative motifs of both the facades and the interiors of the buildings. The decoration was a continuation of the military architecture tradition, adapted to a modern form language. The models of the Finnish defence architecture decoration were found in the abstract decoration of the Italian modernistic architecture which represented the fascist state and its achievements. Towards the end of the 1930s, the influence of the German representative and military architecture and its respective decoration became evident in the Santahamina Military Academy buildings. The Finnish military architecture of the early 1930s had adopted the *Siedlung* building principles and form language, predominant in Holland and in the Weimar Republic of Germany. Towards the end of the 1930s, along with the adoption of the Nordic orientation as the official foreign policy of the country, the architecture of defence started to approach that of German architecture.

The architecture of Finnish defence was representative and military architecture, with its message enhanced by the decoration associated with the use of the buildings, both on the facades and in the interior. The form language, with the even rhythm and verticality of the round solid pillars in the interior, for example in the Tilkka hospital and the Santahamina Military Academy, linked the architecture to the military sphere. The functionalistic "standard barracks" built in different parts of Finland, the Helsinki Motor Transport and the Niinisaalo barracks, the Immola air base buildings, the central military hospitals and the Santahamina Military Academy were high-class examples of Finnish modernism of the 1930s. The designers, the architects employed by the Ministry of Defence, were defining the new external aspect and symbols of the young republic, its "white" facade. Employed by the ministry, they were also committed to the project of securing and building the nation.

As a result of the Civil War, the colour white assumed a strong symbolic meaning in Finland. The white army and the white, right-wing Finland were the winners of that war, whilst the reds were defeated. Whiteness, the "white boxes", was also a dominant theme in the architectural discourse of modernism. The colour white was associated with hospitals, hygiene, cleanness and health. It was not a question of hygiene as such, but of the image of hygiene.

Subconsciously, the modern architecture was associated with a healthy body. During a period in which the greatest danger to national health and defence capacity was TB, the white architecture was the representation of health. Architecture was seen as a medical instrument, a mechanism that protected the

body and made it efficient and healthy. The underlying desire in the design of the barracks for the ranks was to turn them into such medical mechanisms as protected the conscripts from disease. They were to be "temples of health". In addition to preventing sickness, the barracks were to educate the young men in cleanness, hygiene, and patriotism. The barracks was also a pedagogic mechanism.

The white functionalism was a suitable architectural style for the young independent Finnish nation because it differed from the earlier military architecture of the foreign power, Russia. The plain red-brick facades were no longer suitable for the new military buildings because the unfinished brick surface was associated with the barracks built in the 1910s by the Russians for the Russian troops stationed in Finland. The pure white Nordic functionalism was politically suitable since it linked Finland to Scandinavia, i.e., to the West. The white functionalistic military architecture was a representation of health, the modern and the state, the white Finland.

The social programme of functionalism, displayed in housing construction both in Sweden and the social-democrat Weimar Republic of Germany, was also partly adapted to the Finnish defence construction, in the form of improved barracks conditions and medical care. It was also reflected in the housing of the regular army. In this sense, it can be maintained that the architecture had a social content. The architecture – new appropriate barracks with water closets, well-lit side corridors, refectories, saunas and hospitals – constituted a part of the social concern which was characteristic of modernism and the construction of the welfare state. Through the means of architecture, the defence services promoted the modernisation of Finland and contributed to the first steps of the welfare state during the inter-war era. The architecture of the defence services played an integral part in the creation of the Finnish identity. In the 1930s, the national identity was constructed through the modern.

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