

# LE TEMPS DE 'L'ENCRIER'

The time of the  
'Inkpot'

“A building  
created out of  
fear of being  
overwhelmed  
by the new era,  
but now to be  
embraced”.



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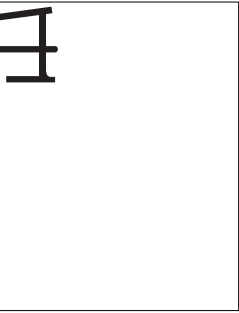
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# I. FOREWORD

A walk through the inner city of Utrecht conveys a sense of conviviality. The series of small shops, situated in narrow streets that eventually lead to the nature-filled canals, and the cosy squares filled with people enjoying the first sunrays from terraces, contribute to this. This delusion of cosiness and conviviality comes to an abrupt end at the edge of the city centre. In the direction of the central station, there it stands. A colossal brick building, alien to all surrounding architecture. With, as the icing on the cake, a 'literal' alien touch. In this case, I am talking about the Inkpot.

In my preliminary research, I immediately came across some unusual facts. The client and the architect obviously played a major role in this, but there were no further/other influences to be found. This was therefore the immediate reason to investigate this unusual building further. In this thesis, I will look for the influences from that time, and to what extent the architect has responded to them. Please join me in this investigation and I hope you enjoy reading it.

Liam Verduin







On the 11th of November 1918, the cannons on the western front of the First World War fell silent, ending a war period of more than four years. Although the Netherlands was neutral during the First World War, the Dutch army had been on full alert for four years to defend its independence. Thousands of Dutchmen were mobilised in the forts of the Dutch Waterline around Utrecht. The soldiers had no enemy, so they were bored to death and looked for entertainment in Utrecht. Not only did this bring many civilians to Utrecht during the war, but strangely enough, Utrecht was also very popular after the war. One reason for this popularity was the fact that Utrecht was centrally located, and therefore far away from the national borders. This made Utrecht extremely suitable for the accommodation of refugees and interned soldiers, who at the time did not want to be accommodated at the borders due to the resulting security risks (van der Linden & van Raan, 2017, p. 9).

This led to a large increase in the population at that time. And of course, the city had to respond to this. Many architects and urban planners stood up and brought their ideas to the municipality. That Utrecht in 1919 had ambitions to become a big city is clear from the General Expansion Plan that the famous architect Hendrik Petrus Berlage was working on that year, together with the director of Municipal Works Lambertus Holsboer. Utrecht wanted to free itself from the restrictions imposed by its muni-

cipal boundaries, as well as from the 'forbidden enclaves' around the forts of the Nieuwe Hollandse Waterlinie. The city wanted to grow from 140,000 to 450,000 inhabitants (Renes, 2005, p 56). The plan was also progressive in terms of traffic technology, with a double ring of two bypasses and traffic breakthroughs in the inner city. Many monumental elements and buildings had to make way for this, but this in turn would provide opportunities for modernisation.

The General Extension Plan indicates Utrecht's growth ambitions, but says little about individual buildings and architectural styles. The architects who formed a footnote in both the architectural history literature and the historiography of historic preservation were H.P. Berlage, K.P.C. de Bazel and J.J.P. Oud (Meurs, 2000, p. 44). Renovations in the inner cities came from their vision and formed a 'modern trend'. The nineteenth-century neo-styles, Jugendstil and the transitional forms in between, made way for rational brick architecture, but the Amsterdam School architectural style also made its appearance in Utrecht. Not only in the field of architecture and housing there were major changes. The city had to deal with more traffic and transport in the city. The introduction of the car at the beginning of the twentieth century also brought major changes to the road network. It also became possible to get closer to the city centre by car. These changes posed a major threat to the long-standing train

network. It would fall behind the new technology relating to the car. This fear of being overwhelmed by the new era was remarkably accompanied by a flight into imitation and historical fetishism (Dethier & Centre de création Industrielle, 1978, p. 26). This was particularly noticeable in railway architecture. This was also true for the office buildings of the railway companies. The first two main buildings in Utrecht were therefore built in classical styles. The first in neo-classical/ eclectic style by architect N.J. Kamperdijk. The second main building in neo-Renaissance style was designed by J.F. Klinkhamer. But in 1917 the plans for a new, and also third, main building came. To perpetuate/reinforce the character and identity of the railway, a radical new design was needed. This is why G.W. van Heukelom was appointed as civil engineer to make a design for the new main building of the Dutch Railways (NS). The Inkpot was born.

This thesis attempts to describe and discover the precise eloquence of the Inkpot. This means to describe the idea behind the design, positioning and styling in the context of the city of Utrecht. But also briefly the general context within the Dutch Railways (NS). The main question is: In what way did G.W. van Heukelom's Inkpot design respond to the modernisation that not only the city of Utrecht, but also the Dutch Railways (NS) experienced at the beginning of the 20th century? This thesis attempts to describe and disco-

ver the precise eloquence of the Inkpot. This means to describe the idea behind the design, positioning and styling in the context of the city of Utrecht. But also briefly the general context within the Dutch Railways (NS). The main question is: How did G.W. van Heukelom react with the Inkpot design to the modernisation that not only the city of Utrecht but also Dutch Railways went through at the beginning of the 20th century? How Inkpot fits into the context of the city of Utrecht is mainly discussed in the first chapter. This chapter examines the general expansion plans of primarily Utrecht, but also which architects and city plans were relevant at the time. The findings of this will ultimately lead to a statement about the extent to which the Inkpot fits into these plans. To further illuminate the eloquence of the building -the Inkpot- the second chapter looks at who commissioned the building. It examines how the ideas of the Dutch Railways influenced the design. It also looks at how railway architecture as a whole dealt with and/or coped with rapidly changing technology. Finally, the third chapter looks firstly at the Inkpot itself, but of course secondly at the actual architect. Who was the architect, and which architects influenced his ideas? This chapter first looks at the architect's background and then assesses the extent to which he allowed himself to be led by his surroundings. Ultimately, an assessment will be made of how the Inkpot can be assigned to the relevant architectural movement.





### Utrecht in the early twentieth century

- a. The 1906 railway plan
- b. General expansion plan
- c. Reception of 'the big three'

Utrecht is, what one might call, a fairly “slow grower”. Around the middle of the nineteenth century, the city was still the size it had been in the late Middle Ages (Jacobs & Smit, 1988, p. 54). Therefore, in the second half of the nineteenth century, major changes were required. The city walls with their associated bastions made way for new public gardens. In the case of Utrecht, these came from the hand of J.D. Zoicher jr. This plan acted as a halt to the city’s too rapid growth and would therefore prevent the city’s outskirts from immediately becoming urbanised. Outside these parks, however, there was plenty of development. Around the walled Weerd and the Vecht; outside the Catharijnepoort along the Leidse Rijn and the Vleutense Vaart; at the Tolsteeg barrier along the Vaartse Rijn, the Kromme Rijn and the Gansstraat; and outside the Wittevrouwenpoort along the Biltstraat.

With the opening of the railway station on the Rhine Railway, the present central station, more densification took place from the year 1843 onwards. Especially in the area between Catharijnesingel and the railway line. Especially the Catharijnesingel will become very important later on in this thesis. Furthermore, the direct surroundings of the city had a rural character. The meadows and garden lands were

cut through by roads and waterways. This is also the case on the east side by the Nieuwe Hollandse Waterlinie. These roads were mainly of military importance as they connected the various forts with the city and its barracks. But also on the western side, the city was somewhat delimited. In the case of the western side, it was bounded by the railways. These railways formed a real barrier that was difficult to overcome. This was because these were important railway connections with, for example, Amsterdam, The Hague and Rotterdam. Because of this barrier on the western side, in the last decades of the nineteenth century the city of Utrecht grew mainly in an eastward direction. Around the district Wittevrouwen the city quickly grew dense, but also around the Maliebaan there were lots of developments. This urban growth also meant that a railway link had to be made. In this case to Hilversum. But due to its unfortunate location, this station, called Maliebaanstation, was never used intensively (Jacobs & Smit, 1988, 54). But unnoticed, Utrecht got itself into another problem with the construction of the Eastern Railway. The construction ultimately resulted in the city of Utrecht now being situated in the middle of a railway ring. And because all railways and stations are at the same level of the city,



Utrecht was suddenly built in. Initially, this caused considerable inconvenience to road traffic in particular.



### a. The 1906 railway plan

By the end of the nineteenth century, Utrecht had become not only a city of notables, but also a real working-class city. The Merwedekanaal, which skirted the south of the city, had become an industrial area, just as the Vaartse Rijn towards Jutphaas had been since time immemorial. Moreover, Utrecht was a hub of railways, which made it easy to transport raw materials and finished products to and from the factories. Therefore, it was not surprising that the Railways Commission issued an expansion report in the year 1906 in which the railway tracks were mentioned first (Blijstra, 1969, p. 164). In this report, it was proposed to both improve the current situation and at the same time pay attention to other public interests. Other public interests are then mainly referred to as the 'interests of national defence'. In addition, this report from 1906 also looked at future plans. This was done with an expectation for a period of fifty years. This took the 'growth of the population' into account. Utrecht would be an excellent location for offices, schools, state buildings and mi-

litary establishments because of its central location. This character would contribute to a constant population growth of not only Dutch citizens (read: foreign population). This was further reinforced by an ever-increasing birth surplus (Spoorwegplan 1906, p. 38). In short, Utrecht had to expand, not only in terms of buildings but also primarily in terms of railways.

However, the city of Utrecht had no plans to become a 'built-up city' (Spoorwegplan 1906, p. 39), so the municipality relied on the outlying areas (with their associated municipalities). The question was then only in which direction the city should go (east or west). The biggest reason for this was that the city of Utrecht was surrounded by railways. For this reason the railway commission finally chose the eastern side because the west was the most unfavourable because of these railway tracks. On the same unfavourable southeast side the choice was made to build a single -and elevated- central station, thus replacing the station on the Maliebaan. In addition, more elevated tracks would have to be built on the east side to facilitate passage on that side.



### b. General expansion plan

However, the interpretation from the 1906 report leaves nothing behind from the plans of a on and a half decade ago. After all, the railway commission was not responsible for the design of the further general urban expansion. The commission had completed its task with the aforementioned proposals. In this case, the focus was on improving the traffic situation in and around Utrecht. This caused many problems. Although the railway commission's proposals were reasonably complete, with main roads even drawn in,

they were considered outdated according to the urban planner of the time. Therefore, in 1910, the municipality came up with a first version of the general expansion plan. This plan was only based on the 1901 Housing Act (Jacobs & Smit, 1988, p. 66), so it was not very progressive. It was limited to a design that would not go into too much detail. The plan would also have to be revised every ten years. Mainly because one still wanted to keep the option open to cope with the changing circumstances (Blijstra, 1969, p. 171), which were cumbersome enough in themselves.



After all, the 1906 plan had been rejected, mainly because of the fact that the new central station would be located too far outside the city centre. And because the mayor and councillors exercised their own interpretation of this railway plan in 1910. Finally, in 1912, a new railway plan was drawn up. In this plan the new central station was built closer to (behind) the already existing administration buildings. This ensured that the station, according to the wishes, came closer to the centre (Blijstra, 1969, p. 176). However, this did bring the series of proposals to an end, and this plan was taken up a few years later by the new designers/urban planners of the city of Utrecht.

However, at the beginning of the twentieth century, a transitional situation took place. This picture was sketched by the urban planner (and later mayor of Utrecht) J.P. Fockema Andreae, in the first Dutch book on urban planning theory. With this, he says that a designer of the city should think from two sides. On the one hand with the exact data at hand, think of all kinds of charts, statistics and calculations of the past as well as of the future. On the other hand, with the historical inspiration and personal impressions, such as photographs, situation drawings and records of other cities (Fockema Andreae, 1912, p.39, 40). Without mentioning the name of Berlage, Fockema Andreae found Berlage to be the most suitable designer at the time. So it was not surprising when Fockema Andreae became mayor that he immediately invited Berlage to

serve as an advisor in drawing up a new expansion plan for Utrecht. Besides Berlage, the new director of Public Works, L.N. Holsboer, was also involved. Between 1910 and 1920, this duo finally came up with many proposals. These were seen as plans for the rational city. The proposals were therefore ultimately set out in broad lines, with much emphasis on access and connection within the city of Utrecht. There was far less discussion of further development (where Berlage had done so for Amsterdam and Rotterdam). Remarkably, there were also many proposals for change in the old city centre. There were many breakthroughs and widenings to accommodate the traffic of trams, carts, bicycles and the increasing number of 'automobiles'. Yet this was not the main reason for all the destruction. It was mainly due to the decision to locate the new centre in the old town centre (p. Meurs, 2000, p. 139). To be precise, three centres. First, the square de Neude would be seen as the real centre of the city, the beating heart, as it were, where the Dam in Amsterdam, the Beursplein in Rotterdam and the Plein in The Hague are the main centres. For the second new centre, Vredenburg was designated. The striking thing about this was that Vredenburg was actually nothing more than a traffic junction. But because of the qualities that this location had (market and leisure), the first Jaarbeurs building was realised in this centre. The third, and last, new centre would be the station square. Berlage and Holsboer expected that the main





### c. The arrival of the 'big three'

Holsboer's and Berlage's plans brought about a great deal of building activity. Within the somewhat general plans, many architects stood up who ultimately created a lot of unusual architecture. Think for example of Petrus Houtzagers, Jan van der Lip, Jan Baanders and Gerrit Rietveld. But outside this list are the three most important works (with the corresponding architects) that have characterised Utrecht since the beginning of the 20th century.



#### Post Office, Neude

As mentioned earlier, the plan by Holsboer and Berlage identified three places that should function as new centres. The first in the list is Neude Square. Because of its central location in the city, the choice was made to locate the new main post office on this spot. At first, there was some doubt about this because this would have been the perfect spot for the new city hall. However, the main post office eventually found a better use here. In 1917, architect J. Crouwel made the first plans for the new post office (Koevoets

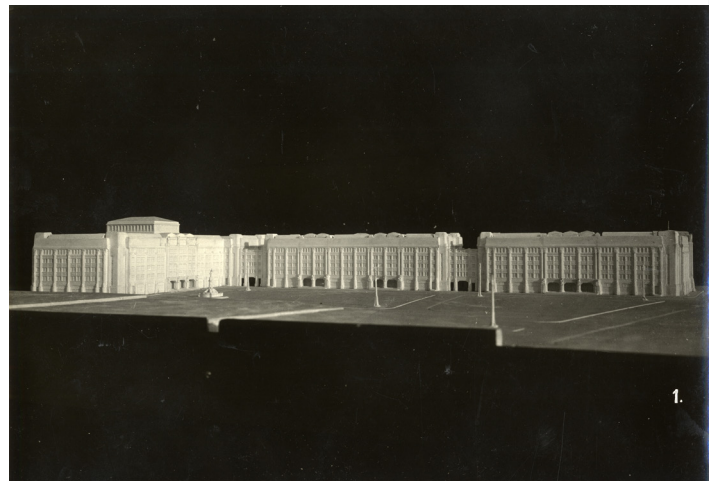
& Dijkhuizen, 2007), but it was only completed in 1924. The building was erected on the site of the old Coin building, the Rijksmunt was to move to Leidseweg. The new main post office would also replace the old and small post office, which was situated behind the Dom and was therefore not central enough. The Utrecht main post office has an almost square plan - sixty metres wide and sixty-four metres deep - with an inlet at the back for postal vehicles. It is a reinforced concrete construction clad with brick. The steep wooden roof starts halfway up the second floor, and the typology was a basic design in which the floor plan was situated around a central hall. Compared to the expressive Amsterdam examples, Crouwel applied the new architectural style in a sober and austere manner. Characteristic features are the use of different masonry dressings, massive walls with relatively small windows, steep roofs and natural stone decorations. The parabola shape of the central hall's dome is also typical of the Amsterdam School. Joop Crouwel was inspired not only by his teacher De Bazel and by the Amsterdam School, but also by G.C. Bremer's design for the main post office in Rotterdam, with its almost identical parabolic hall. Foreign architects were also a source of inspiration. The Finnish architect Eliel Saarinen had a clear influence with his station in Helsinki, Finland. To this day, the post office stands on the Neude square, but has been given a new function after a long time.



### Jaarbeurs building, Vredenburg

During the First World War, the Netherlands lost its international trade contacts, so that after a while it was left to its own devices. Numerous industries came up with products that had previously been imported, which led to a flourishing of domestic trade. This created the need for a central point where domestic trade contacts could be established. On 6 May 1916, the Vereeniging tot het houden van jaarbeurzen in Nederland was founded in the mayor's chamber in Utrecht (Geschiedenis, 2020). Because of its central location, Utrecht was the ideal city in which to hold these fairs. The first Jaarbeurs was held in the spring of 1917 on the Vredenburg and Janskerkhof in temporary pavilions. The architect Jan de Bie Leuveling Tjeenk was engaged for the second Jaarbeurs in 1918, initially only for the various pavilions. When the Jaarbeurs proved a lasting success, a plan was made for a large, permanent building on the Vredenburg. De Bie Leuveling Tjeenk was commissioned for this too, but now together with the more experienced architect Michiel Brinkman. In 1918, the architects came up with the overall plan for three interconnected Jaarbeurs buildings, which would form an L-shape around the west and south sides of the Vredenburg (Bosters et al., 1991, p. 31). The building was 80 metres long, almost 40 metres wide and had

five floors. The concrete skeleton was clad in dark bricks. The windows, masonry pilasters and several light elevations gave rhythm to the façade. The building also had a raised corner section by the Catharijne bridge, for the recognition of visitors coming from the station. The resulting Jaarbeurs building seemed to be a modernised version of Berlage's Beurs, with the necessary influence of the Amsterdam School (Bosters et al., 1991, p. 32). The Jaarbeurs buildings at Vredenburg would be demolished around 1970 in favour of Hoog Catharijne and the Vredenburg Music Centre.



### The Inkpot, Stationsplein

After the first two new centres, the third new centre is of course next. In this case, the station square. The largest brick building in the Netherlands has been erected here. The new main administration building of the Dutch Railways (NS). Naturally, this building will be discussed in more detail later in this thesis.





GEM. DEWINGING

MARKT

MARKT

GEM. WERKEN

TRAM-REMISE

5

5

3

7

6





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H...  
B. J. WIT

VROUWEN  
EN  
FRUIT.



### Compelling force of technology and ingenuity

- a. The NS (Dutch Railways)
- b. Le Temps Des Gares (The Time Of The Stations)

The relatively young history of the railways in the Netherlands was, at first sight, very unstructured. For a long time, people thought they did not need the novelty of something like the railways. In the year 1855 there were only four railway lines: (1) Amsterdam-Rotterdam (via Haarlem, Leiden and The Hague); (2) Aachen-Maastricht; (3) Amsterdam-Arnhem (via Utrecht) and (4) Moerdijk-Essen/Antwerp (via Zevenbergen and Roosendaal). These lines were not interconnected and were operated by four different, independent companies (Faber et al., 1989, p. 11). Nevertheless, a historical pattern can be discerned over the years. This is divided into four perioral groups. The first group is characterised by private construction and exploitation, which runs until approximately 1860. The second period is from 1860 to 1890, and is characterised as state construction and private exploitation. The third group covers a period from 1890 to 1917, and is based on a system of concentration and competition. The fourth period is from 1917 onwards, and due to the last merger, it will be known as the creation of the nowadays well-known Dutch Railways (NS). From that moment on, there were no more separate railway companies, and they operated from a single body.

#### a. The NS (Dutch Railways)

As the last period in particular was of importance to the creation of the Inkpot, this period will be examined in more detail.

Initially, we will look at the period in and immediately after the First World War. At the outset of this war (31 July 1914), the importance of defending the country was growing. Because of this, Her Majesty the Queen authorised a requisition of all railways on Dutch territory, including all equipment. However, the execution of the services remained under the management of the railway companies (Faber et al., 1989, p. 39). This happened just after the various railway companies had reached an agreement on the general passenger rate. This already showed some cooperation. However, this agreement did not bring about the intended profit. This was partly due to the large competition that existed between the different companies. The first step in the cooperation was made. However, due to the First World War (and the requisition) an actual merger did not take place until after the war (1917). However, the regulations of the requisition were in force until longer. Until 1 January 1920 to be precise. Within those years, the debts had risen to sixteen million guilders, partly due to the war. Although this was

covered by the State, it resulted in Dutch Railways having to take over a loss-making company. These losses were the result of internal and external factors. The internal factors were due to business operations. Working conditions improved greatly in those days. Working days became shorter and the general position of staff improved. For this, many more employees had to be hired. At the same time, salaries also increased. In contrast, an external factor was the advent of new techniques in passenger and goods transport (Faber et al., 1989, p. 40-41). Although the history of the train was relatively young, the feeling of being overwhelmed by the new era was very present. The biggest trigger was, of course, the arrival of the truck, bus and car. In short, external and internal factors forced the NS to change the way it operated. A real turnaround in thinking and ingenuity was required, but also an innovative and renewed image was necessary to save the railway transport from ruin.

## **b. Le Temps des Gares (The Time of the Stations)**

The four periods as mentioned at the beginning of this chapter did of course not only characterise how the railway companies operated. Of course, it also had direct repercussions on the form language and architecture of the station buildings and railway administration buildings. Although the periods are roughly parallel, one can identify several periods that characterise the architecture.

The first period is from the moment the first trains made their appearance in the Netherlands (around 1830-1840) until 1860. This phase can be characterised as the experimental stage. In this period, the layout of the first stations in the Netherlands is very simple. A platform and some buildings together form a 'yard', and this whole is enclosed by a wall or fence. At the time, there were mainly two types of stations. A head-end station (perpendicular to the tracks, often end stations), and a parallel station (parallel to the tracks, often connecting stations). The nineteenth century had strict requirements for symmetry, and at that time was mainly guided by Classicism and Gothic architecture (Saal & Spangenberg, 1989, pp. 13-15). The first railway line to be built was between Amsterdam and Utrecht. It was built by the *Hollandse IJzeren Spoorweg-Maatschappij* (HIJSM, later HSM), founded in 1837. This line ran from Amsterdam to Rotterdam. In 1843, the second Dutch railway line was





opened, the Rhine Railway from Amsterdam Station to Utrecht Station. It was built by the Nederlandsche Rijnspoorweg-Maatschappij (NRS). The railway companies of that time still worked from each station that was linked to each railway line. However, these stations were of a classicist nature. The first example is the parallel station of Haarlem. An elongated classicistic building of one hundred and twenty-five metres long. The second station was the first frontier station in the Netherlands. This was partly because the railway was wedged between two bodies of water. As a result, there was no room to build parallel to the track, but rather at right angles to it. This station is located in Amsterdam. A characteristic feature of this building is the round street facade with a front entrance with six Doric columns and a decorated pediment.

The second period is from 1860 until 1880. In this period, it is characteristic that for the first time the state gets involved in building and inventing

railways, so in the year 1860 the Nederlandsche Centraal-Spoorweg-Maatschappij (NCS) was founded. The NCS laid the line Utrecht - Amersfoort - Zwolle - Kampen between 1863 and 1865. But besides this private establishment, there was also the wish from the government to construct several railways that would also travel to the north of the country. However, these railways were not operated by the state, but by another private company. Namely, the Company for the Exploitation of State Railways (SS) that was founded in 1863. With this, the SS immediately became one of the largest, together with the HSM. This resulted in fierce competition where both companies made agreements with smaller and more local companies. This led to mergers between the SS and other railway companies, which in turn led to the administration becoming larger and more complex, so that the need was felt to move it from The Hague to a centrally located city. That became Utrecht. In 1871, the first main building (HGB I) was



designed and built in Utrecht by order of the SS. The building is not very characteristic, but its neoclassical/ eclectic appearance clearly refers to a bygone era. Designed by N.J. Kamperdijk and C. Vermeys, it has a distinctive symmetrical layout that makes use of classicist motifs such as rusticated work, pilasters, pediments, round-arched windows, entablature frames, balustrades and use of clean brickwork, alternating with stucco elements, as well as contemporary allegorical representations. In the centre of the building there is a pediment with 'a winged wheel with lightning bolts, representing the speed of the railways' (Douma, 2003, p.67-68).

The third period is at the end of the nineteenth century. Namely, from 1880 to 1900. At the beginning of this period, there were never as many new railways built as before. Also the stations came more in the centre of the city. This was when Dutch Rail-

ways experienced its true heyday. Partly because of this, this period is characterised by the portrayal of power. Simple classicist architecture made way for representative, monumental and heavily ornamented Neo-Renaissance architecture. The station building was the product of the industrial society of the time. It aimed to expand the area and symbolises the communication of goods and people, as well as helping to bring different peoples together. The cover of the 1978 exhibition at the Centre Pompidou even referred to a representation of a modern Tower of Babel (Dethier & Centre de création Industrielle, 1978, p. 26). This indicates the times in which the Dutch railways were operating. These heydays were accompanied by expansion of the two largest railway companies. At the end of the previous period (1860-1880), the HSM did not yet have a head office. Of course, it could not lag behind the SS, so their first administra-





tion building was constructed in 1884. The Droogbak in Amsterdam. The building was designed in an exuberant neo-Renaissance style, just like the Amsterdam Central Station (1881-1889, J. Cuypers); the Amsterdam City Theatre (1892-1894, J. Springer & A.L. van Gendt); and the Rijksmuseum (1876-1885, J. Cuypers). However, the dry box was designed by C.B. Posthumus Meijes, in collaboration with station architect D.A.N. Margadant.

At this time the SS was even allowed to take over another railway company, namely the NRS. This meant there was an almost immediate demand for even more capacity to house the workers. The HGB I became too small, and therefore plans were made for HGB II. Eventually, the second Main Building was completed in 1895. It was built in neo-Renaissance style to a design by J.F. Klinkhamer. This building was connected to the first Main Building by means of

an air bridge, and was actually much more characteristic right from the start. It was designed with many decorations and ornaments that exuberantly refer to the glory days of the Golden Age. An example of this is a row of sculpted ram's heads and 'to either side of a bell surrounded by festoons stand two sculpted figures (Mercury and Victoria) representing Commerce and Industry respectively' (Douma, 2003, p.68-70).

In the period from 1900 to 1920, there was still expansion on the railways, although a turning point can be seen in this period. Around that time, Dutch architecture gained momentum. A number of architects were looking for a different language of form compared to the usual one at the time. The most important representatives were H.P. Berlage, K.P. de Bazel, W. Kromhout and J.W. Lauweriks. But the turning point was not only due to the supremacy of a new architectural



style, but also to social and economic considerations. The heyday of the previous period was coming to an end. Dutch Railways was in danger of losing its monopoly on public transport. A new era had dawned, one of austerity (Saal & Spangenberg, 1989, p. 76). This austerity was immediately visible in railway architecture, as well as in the office buildings of the railway companies. The first example came from an international company, namely the Dutch East Indies Railway Company. J.F. Klinkhamer was also allowed to work for this company, in collaboration with the architect B.J. Ouëndag. It was built in the year 1913 and is located in the city of The Hague.

This austere era was not only noticeable in architecture,

but also in the development of the railways. The railway companies were having a hard time keeping their heads above water and it therefore called for change. The solution was to merge all the remaining and independent railway companies. The last merger of the railway companies in the Netherlands became a fact. The NCS, HSM and SS continued under one name: 'De Nederlandse Spoorwegen'. Because there were already two existing Main Buildings located in the city of Utrecht, it was decided to bring all railway companies to Utrecht. For this, of course, another new building had to be designed. The plans for the HGB III were made. This building was later nicknamed "The Inkpot".













### The Inkpot and its architect

- a. Le Temps de 'L'Encrier' (The Time of the Inkpot)
- b. G.W. van Heukelom as institutional designer
- c. Influence of Berlage and Architectura et Amicitia
- d. P. Behrens and brick expressionism



A new building was erected on the station square (chapter 1c.). This square was determined by Holsboer and Berlage as one of the three new centres. The building would be directly related to the nearby train station. Due to the latest merger of the railway companies, it was deemed necessary to establish a new Main Building (chapter 2.). Next to the previous two main buildings. A prominent place, because it had to represent the immortalisation of the railways. The arrival of the automobile made it necessary to design an imposing building to save the NS from destruction (chapter 2a.). But it was not only in the field of transport that much change was taking place, also in the field of urban development and architecture one could speak of a turning point (chapter 2b.). A number of architects were looking for a different/new language of form. This starting point will certainly also have played a role in the design of the Inkpot.

#### a. Le Temps de 'L'Encrier (The Time of the Inkpot)

Just before the 'official' merger of 1923, a cooperation contract was signed in 1917. This was between the Hollandsche IJzeren Spoorwegmaatschappij (HSM) and the Staatsspoorwegen (SS). No separate railway companies, but a single large company. The NS. Engineer G.W. van Heukelom was put in charge of all major railway projects in the Netherlands from that moment on. The merger created the need to continue working under one roof. However, this merger was on such a large scale that a very large building was needed. At the time, the choice was made for the location next to the other main buildings (HGB I and II) at Moreelsepark in Utrecht. Utrecht thus definitively became a true railway capital. The building would be called the Third Administration Building or HGB III.

In 1918, under the direction of Van Heukelom, the construction of this megalomaniac project began. But at the end of the First World War, it was not easy to obtain building materials. This was immediately noticeable during the tendering period. Contractors calculated their prices with very high risk margins. As a result, all price proposals far exceeded the budget. This led to Van Heukelom's historic



words: "Then we'll do it ourselves" (Bakker & Roding, 2000, p. 23). He entrusted the Construction Office of the (new) NS with the task of acting as a contractor, in order to comply with all statutory and regulatory provisions. This new construction company was given the name: 'Het Bouwbedrijf'. However, this was not appreciated by the contracting world, which therefore began to boycott it. As a result, this young construction company was forced to obtain its own materials. Because of the brick design, the NS took over a brick factory from the Boland brothers in Schijndel, Brabant, called 'De Molenheide'. Only through this factory could half a million bricks a day be processed in Utrecht. As a result, a floor was built every month. But not only the exterior was of great magnitude, also the interior had to be built. For this purpose, a forest was bought in Limburg. The oak wood that was gained there was used for the ceilings, panelling and furniture. But this forest alone was not enough, the shortage was supplemented from Sweden. But one of Van Heukelom's most inventive proposals was before these two operations. A lot of steel was needed for the foundations; this was very difficult because of the arms produc-

tion. This problem was solved by the clever invention of using old railway rails as reinforcement. As a result, a total of twenty-one kilometres of rails went into the ground. The brick building, consisting of twenty-one million bricks, was completed in 1921. This makes it the largest brick building in the Netherlands. The building is one hundred metres wide and eighty-five metres deep. It contains four wings that run around a common courtyard. The building has a completely symmetrical design and is raised on a podium. The lower parts have four floors, and the middle part has five. The highest part of the building is a fifty-metre tower. This tower contained a water tank of twenty-seven cubic metres, designed by Van Heukelom. The vertical buttresses and window sections give the building's facade a strong rhythmicity. Internally, everything was designed by Van Heukelom. When designing the furniture, the well-being of the workers was taken into account. But Van Heukelom's work was also found externally. The small park in front of the building, with the accompanying brick walls and benches, was also designed by him (Bakker & Roding, 2000, p. 24-27).

The building was not only iconic shortly after its completion. Even now, the park in front of the main entrance is crowded when the weather is good. And so the building became very popular with the inhabitants of Utrecht. So much so that it got a nickname. The 'blue' loam from the surroundings of Schijndel gave the brick its unique purple-brown colour. This colour, and the remarkable shape, led to the building being named "The Inkpot". In terms of technology, sustainability and circularity, De Inkpot was also far ahead of its time. The use of local materials and the reuse of the rails is in line with the principle of sustainable/circular building *avant le lettre*.

### **b. G.W. van Heukelom as institutional designer**

George Willem van Heukelom, born on 29 March 1870 in Tilburg, was a Dutch engineer. Educated from the year 1887 at the Technical University in Delft. Initially, his idea was to study for both civil and structural engineering. However, due to the conflicting teaching hours, he finally decided to study for civil engineer. He finally graduated in 1891. He was then only 21 years young (van Heukelom-van Den Brandeler, 1953, p. 10-12). After having had a few jobs during his studies, both with the Directorate-General for Public Works and Water Management and with the municipality of Amsterdam, Van Heukelom finally joined the *Maatschappij tot Exploitatie van Staatsspoorwegen*. Here, at a young age, he joined the *Dienst van Weg en Werken* as an aspirant engineer (van Heukelom-van Den Brandeler, 1953, p. 15). Constructions such as bridges, platform adaptations and station roofing were among his first tasks. Van Heukelom got to know the architect of the 's-Hertogenbosch station, Eduard Cuypers, through the project for that station. The well-known Dutch architect Pierre Cuypers was Eduard's uncle, and therefore quickly became known to Van Heukelom. However, the same project (station 's-Hertogenbosch) drew a lot of criticism, especially from the influential architect H.P. Berlage. Partly because of this criticism, both Eduard Cuypers and Van Heukelom became familiar with



Berlage's architecture. All the work that Van Heukelom received was from the State Railways. This made him one of the 'house engineers' of the time. After designing several stations (as already mentioned in chapter 2b), Berlage's influence increasingly affected Van Heukelom's work. Maastricht Station is a good example of this because of its spatial structure. This station was also the first 'parallel station', and thus immediately unique in its kind. During this project, Van Heukelom was appointed head of the Road and Works Department of the State Railways in 1913. And in the year 1917, he received his honorary doctorate in Technical Sciences from the Technical University in Delft. From that moment on, Van Heukelom was not only a civil engineer, but also had his desired title of structural engineer. During his further career, the works of Berlage continued to exert an influence. For Van Heukelom, however, it was a real struggle at the time between the architect Pierre Cuypers and Berlage. But the austere and flat façades, the austerity and rigour of the buildings and Berlage's desire to break through the historical styles made a great impression on Van Heukelom (van Heukelom-van Den Brandeler, 1953, p. 98-99). The end of his career came. After forty-four years of service with Dutch Railways, Van Heukelom retired at the age of sixty-five. But he still remain-

ed active in the municipality of Utrecht. The mayor then spoke of his admiration for Van Heukelom for all his work:

*"When approaching the city and seeing its silhouette, one always looks with reverence and pride at our towers and churches. Van Heukelom was involved in the restoration or construction of almost all of them: the tower of his own building (the Inkpot), the towers of the Buurkerk, the Jacobi Tower, the Klaastoren, and, above all, the Domtoren, which - badly mutilated - has been returned to us in new beauty. But important monuments in the city also had Van Heukelom's attention: Leeuwenbergh, St. John's Church, the canals with their wharves. Numerous buildings have also been restored to their former glory and have become part of city life again".*

Because of these honourable words from the mayor, Van Heukelom finally received the highest and only decoration that was given to exceptional citizens. A medal of the municipality of Utrecht, with the inscription: "Vir Sapiens, pulchris artibus honestisque studens" (A wise man, who strives for what is clean, true and good). With this it can be said that Van Heukelom was not only of great influence to the NS but also to the municipality of Utrecht.



### c. Influence of Berlage and *Architectura et Amicitia*

There are many architects who were of great influence on Van Heukelom's work in his time. As previously known, Berlage was the most important. With the design of the Holland House in London, a bridge could immediately be made between this building and the Inkpot. Similarities can also be seen in the design of the Sint-Hubertus Hunting Lodge. In both buildings it is clearly visible how the flat façades and strict verticality were of great importance in the design of the buildings. These aspects must have been considered very important by Van Heukelom. But besides Berlage, there were numerous other architects and buildings that inspired him. In particular,

the forerunners of the Amsterdam School architectural movement. This is clearly visible in the comparisons that can be made between the Inkpot and the Shipping House in Amsterdam. The rhythmic facade with vertical buttresses and window sections are almost identical. Another architect who was important in shaping Van Heukelom's ideas was the Dutch architect Karel de Bazel. This is clearly reflected in the design of the headquarters of the *Nederlandsche Handel-Maatschappij* on Vijzelsgracht in Amsterdam (Meurs, 2000, p. 304-307). The structure of the building in particular is very similar to that of the Inkpot, but here too verticality cannot be ruled out. What is striking, however, is that particularly in this project the glazing is similar. And



the use of stained glass further confirms this. Besides the Inkpot in Utrecht, the Main Post Office was also under construction. The architect for this was Joseph Crouwel. It is therefore not surprising that some similarities can be seen in both designs. Earlier in his career, Crouwel himself had worked for Berlage and de Bazel. But similarities are not only noticeable in the design of the main post office, but also in the design of the Anatomical Institute in Utrecht.

The thing that unites these architects is the Dutch architectural society 'Architectura et Amicitia', which means 'Architecture and friendship'. Both Berlage and de Bazel were presidents of this. And during the period of the planning and eventual construction of the Inkpot. It is not surprising why precisely these two architects were of great influence. But the architects J. Crouwel and Michel de Klerk, Piet Kramer and J.M. van der Meij (front men of the Amsterdam School), who coincidentally were all employed by Eduard Cuypers (Van Heukelom's good friend), were also members of this society. At the beginning of the twentieth century, the society was mainly engaged in the struggle for the succession of modern architecture (Schilt et al., 1992).

The Architectura group was, as it were, the artistic conscience of the more famous architects, who increasingly became entrepreneurs and engineers. Within the society there was a group that left its mark on the magazine 'Architectura' and was thus very influential. However, this group is often forgotten. The group, also called the 'false' sons of modern architecture, consisted of Bauer, De Bazel, Kromhout, Lauweriks and Walenkamp. Compared to the great architects such as Berlage, Walter Gropius, Rietveld and Mies van der Rohe, they were the 'losers'. But on the other hand, without Lauweriks' influence, Behrens' and Gropius' architecture would have been hard to understand (Tummers, 1968). That without De Bazel and Walenkamp, the Beurs would have taken on a different face, oriented more towards the American Romanesque. That without Kromhout, the artist-architects of the twenties would not have had the recognition and organisation to carry through their interests. That without Bauer, villa building would have developed in a different direction and architectural fantasy - a correction to functionalist architecture, which adapted to the interests of the client - might have been lost.



#### **d. P. Behrens and brick expressionism**

During the construction of the third Head Administration Building, Van Heukelom was already appointed Knight of the Order of the Dutch Lion. But the Inkpot also made Van Heukelom famous abroad. German architects in particular were charmed by the building, which they said was very reminiscent of the work of Peter Behrens. The Inkpot had many similarities due to its practical design and its austerity. It was not only the building that had similarities with Behrens, but also the way of working. Behrens is seen as the inventor of institutional design, or house style. Later in Behrens' career, his designs mainly included factory and administrative buildings. Van Heukelom as the house architect of the NS actually did nothing more than that.

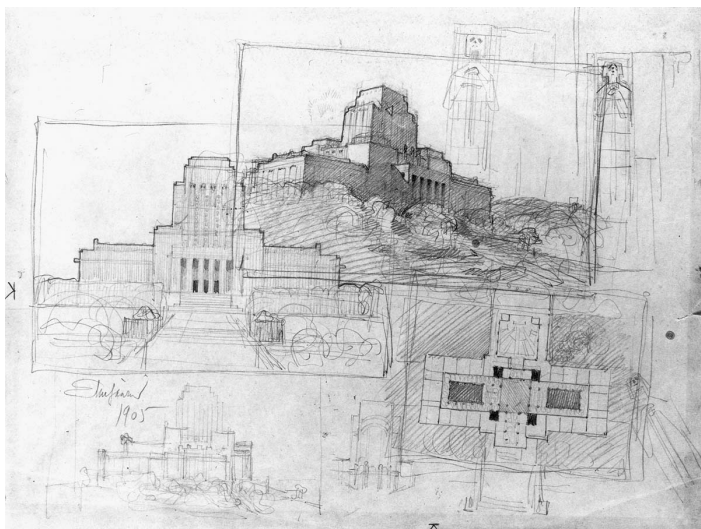
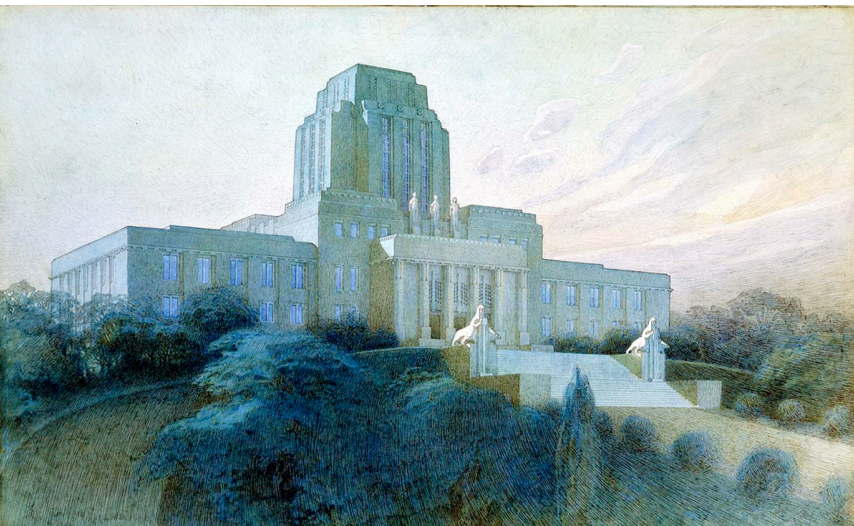
The earlier brick architecture in the Netherlands was mainly influenced by the Amsterdam School architectural movement. The architect Herman Ambrosius Jan Baanders played a leading role within this movement. His design for the Amsterdam Lyceum bears a resemblance to the Inkpot not only in its colour, but also in the verticality of its facade. The later brick architecture that took place between the two World Wars was also image-defining, to say the least. The modern, functionalist designs in glass and concrete were a radical departure from the architecture of Berlage, Kropholler and the Amsterdam School. The advance of the Nieuwe Bouwen movement, which came into being in 1915, was clearly noticeable. A true pioneer and very decisive architect of the time within the movement of the Nieuwe Bouwen was the architect



Jacobus Johannes Pieter Oud. Oud's architecture and vision of modern construction were also very influential in the design of the Inkpot. P. Behrens can also contribute to the classification of the building in an architectural movement. As a great emblematic architect of brick expressionism, it can be concluded that the Inkpot could also fall within this movement. Brick expressionism distinguishes a specific variant of expressionist architecture that uses brick, tiles or glazed brick as its preferred building material. Buildings in this style were mostly constructed in the 1920s, especially in Germany. As much as the Inkpot came from an

Amsterdam School movement, Brick Expressionism is just the specification that the building's design needs. Coincidentally, the Amsterdam School is classified as the 'Dutch version of German brick expressionism'.

A final foreign comparison that can be made is with the architect Eliel Saarinen. Saarinen's proposal for the design of the Finnish parliament building and even our own Dutch Peace Palace has strong similarities to the Inkpot design. The clear verticality in his designs corresponds to the architecture of Van Heuke-  
lom. However, whether an actual meeting took place between the two architects is not known.









In order to be able to conclude in what way architect G.W. van Heukelom, with the design of the Inkpot, reacted to the modernisation at the beginning of the twentieth century. Van Heukelom was mainly subjected to the business of the Dutch Railways. Within this organisation, he mainly came into contact with the house architects of the time, with the accompanying architecture. The architect J.F. Klinkhamer, in particular, was of great importance here. Although Klinkhamer's design for HGB II did not take part in the modernisation that followed the First World War (it was built before then), he did set the tone with the administration office of the Dutch East Indies Railway Company. Given the time in which this building was designed and built before the arrival of the HGB III, it is almost inevitable that the house architect of the NS had an influence on Van Heukelom. But in addition to the fact that Van Heukelom was very much influenced by the NS (as an institutional designer), he was also influenced by the two main architectural movements of the time. Firstly from the Amsterdam School, which he acquired through his befriended architect E. Cuypers. This took place mainly in the run-up to the actual design. But as a second prominent movement, there was also influence from the (emerging) Nieuwe Bouwen architectural movement during the planning phase.

However, an overarching theme is also noticeable here. The end of the First World War

caused a desire from all quarters for a new way of looking at things. Within the NS there was austerity, within architecture the architects H.P. Berlage, K.P. de Bazel, W. Kromhout and J.W. Lauweriks, they were looking for a new form language. This led to rationalism. But with the advent of Het Nieuwe Bouwen, a real turnaround is noticeable. But changes were also made at the urban level. The plan of Berlage and Holsboer was decisive in how the city could eventually expand, making it possible to develop many new buildings. This plan, too, was based on austerity. Thus, all three chapters addressed in this thesis have to some extent influenced the design of the Inkpot.

The creation of the Inkpot also provides new insights into the problems we are now facing. Especially in the area of material use and acquisition of materials. By having to build/develop many things yourself, the final product can also be of higher quality. Van Heukelom himself ensured at that time that the entire building could be built from the inside out. But the biggest and most current point that stands out is how materials were handled. The building materials came, for the most part, from the surrounding area and therefore did not require much in the way of emissions from transport. Even materials that were already under management were used and reused in the building. The largest brick building in the Netherlands therefore does not have the largest footprint at all.



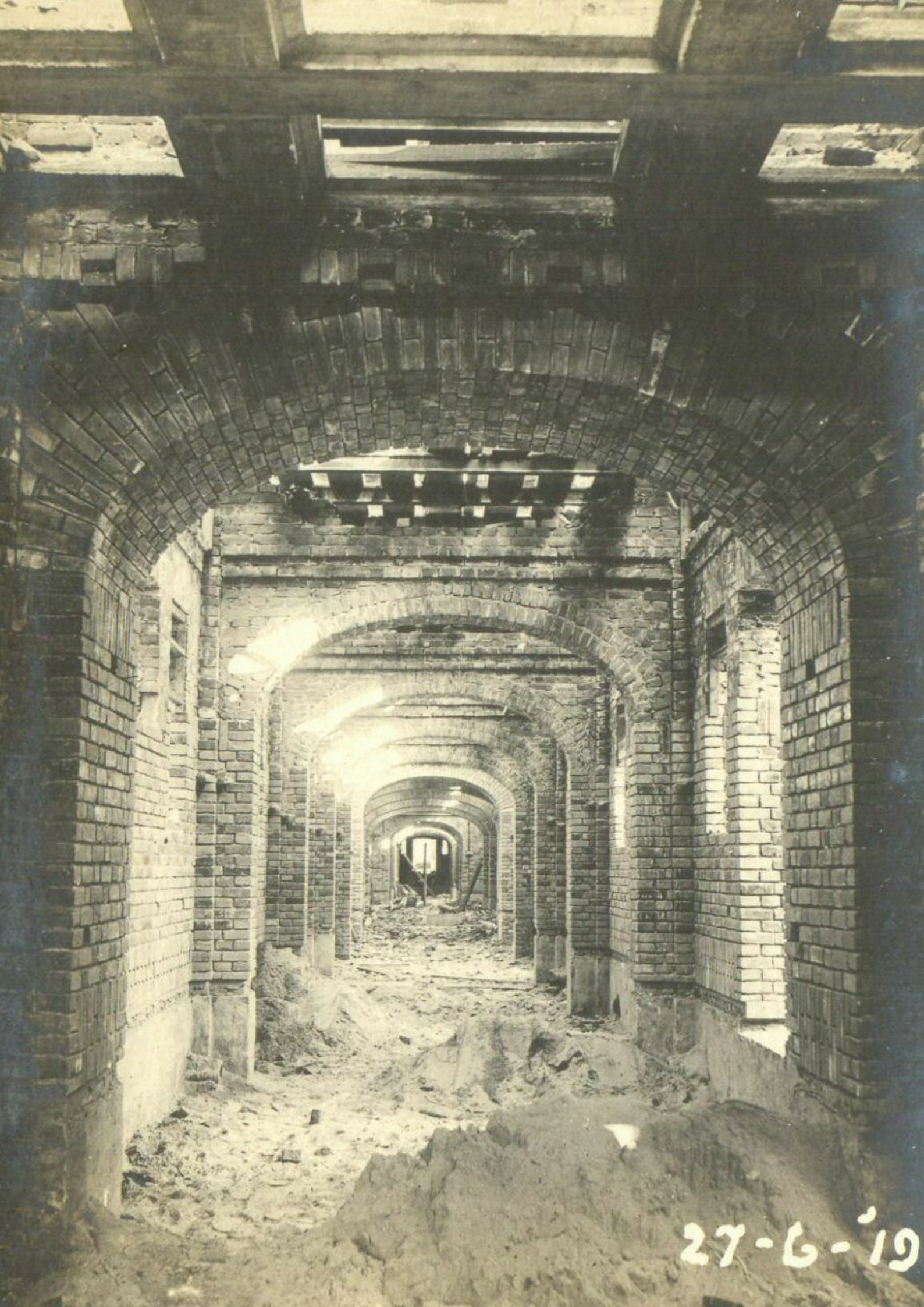




Looking back on the process of writing this dissertation, I feel that the information I have found has provided a good basis for understanding the origins of the Inkpot. However, in my opinion, it lacks depth in a single theme. The various chapters have ensured that each one can be of great importance in itself. By this I mean especially that each chapter can be a separate investigation in itself. In this respect, I am satisfied with the way the first two chapters have unfolded. In them,

I was able to make many connections within the development of Utrecht, but also in the development of Main Administration Offices. However, this has resulted in the third chapter only scraping the surface. It really lacks depth and many conclusions are only drawn from a number of secondary sources. I think I allowed myself to be led too much by this. Especially the story of the Nieuwe Bouwen and brick architecture of the time could have used much more depth. Stories about the architects J.J.P. Oud, Behrens and Taut, for example, could have been illuminated in greater depth. The influences of German and American architecture could also have been discussed more. All in all, I am happy with the result. It has become a broad thesis that has brought the knowledge of the Inkpot back to the surface.





27-6-19

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- Page 5 Gezicht op het 2e Administratiegebouw van de Staatsspoorwegen (Hoofdgebouw II van de Nederlandse Spoorwegen; Moreelsepark I) te Utrecht na afloop van een werkdag; op de achtergrond het 3e Administratiegebouw van de Nederlandse Spoorwegen (Hoofdgebouw III van de Nederlandse Spoorwegen, Moreelsepark I). (1937, March I). [Foto]. Het Utrechts Archief. <https://hetutrechtsarchief.nl/beeldmateriaal/detail/7a58a902-0217-5a93-ab75-7a273706e783/media/3eb25f61-l2bc-e25c-9c27-6ld598902a72?mode=detail&view=horizontal&q=hoofdgebouw%20III&rows=1&page=62>
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- Page 23 Gezicht op het 2e Administratiegebouw van de Staatsspoorwegen (Hoofdgebouw II van de Nederlandse Spoorwegen; Moreelsepark I) te Utrecht na afloop van een werkdag; op de achtergrond het 3e Administratiegebouw van de Nederlandse Spoorwegen (Hoofdgebouw III van de NS, Moreelsepark I). (l937, March I). [Foto]. Het Utrechts Archief. <https://hetutrechtsarchief.nl/beeldmateriaal/detail/7a58a902-02l7-5a93-ab75-7a273706e783/media/3eb25f6l-l2bc-e25c-9c27-6ld598902a72?mode=detail&view=horizontal&q=hoofdgebouw%20lll&rows=l&page=62>



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