Willem Marinus Dudok in Hilversum. The Primary Role of the School in the Construction of Urban Space. Idea and Method

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The shape of the Dutch city of Hilversum is the result of the decisions on urban planning made in the 20’s and 30’s by architect Willem Marinus Dudok. The foreshadowing of the future through the plan does not appear as the result of a naive revival of the forms of the past. Much less the claims of novelty appear to resolve in the radicalism of forms that have no link with the tradition. Rather, the form seems to suggest a third alternative: the conciliatory option which refers to the ability of the project to interpret the vital energies of the tradition in a new and informal way.

We recognize the reference to this tradition in the most authentic experience of the medieval city as well as in the idea of the classical European city, assimilated through the work of the architect Hendrik Petrus Berlage.

In order to promote a controlled growth of the city, the plan moves within an operative method that, takes into account the needs of the community, is respectful of the environmental and historical values of the city. It is true that in the logic of a highly flexible programmatic planning, public buildings, and primary urban facts in the composition of the city, play a decisive role in interpreting the planning of the residential neighbourhoods. In this key we can interpret many school buildings that Dudok built for the city of Hilversum: the discovery of an "invention of design" that measures, from time to time, the ability of the project to build urban scenarios that are appropriate for the life of the community. So, the project is no longer a reference to a well-established typological form, inadequate to express social changes, but it becomes an interpretation of ancient yet valid forms that prefigure the city of its time.

**Keywords**: town planning, architectural theory, urban space.
The Invention of the Urban Form between Tradition and Modernity

The lesson we can draw from the expansion plan of the city of Hilversum (figure 1) is linked to an essential truth. It considers the time of planning as a method that is part of the dialectic of the historical process. Thus, both preservation and new-buildings are part of the same acts of consciousness where preservation should be intended as the re-enactment of the past and new-buildings as a continuation of the historical process. Modernity is part of the tradition and for us being modern, means to actively contribute to the flow of tradition.

In this sense Dudok’s position in the debate of the Modern Movement gains its authenticity through drawing up the plan for Hilversum, he proposes a formal invention away from the radical positions of the mythologies of the new and interprets instances of novelty in continuity with the energies and vital forces of tradition. It is true that the plan of Hilversum cannot help but confront tradition. In other words with the existing environmental and historical resources which form the hallmark of the city and of its territory. But it is equally clear that the project cannot escape from the need to measure itself with the claims of novelty raised by a process of modernization that has affected the city of Hilversum in a slow but relentless way. With the result of the cultural achievements of the industrial revolution.

By pre-existing environmental conditions, we mean the particular contents and characters suggested by the environment. Where the environment is not only the natural landscape, with its values, but also the human artifice. The experience of the city and its history. Where the legacy of a tradition built on the medieval past is preserved. On the other hand, the Middle Ages represent the most genuine experience of the Dutch identity. And even when the Renaissance muscles its way into the country, it is assimilated through the sensitivity of a people or race.

Certainly the nature with its heaths, woods and hills is an integral part of the identity and the collective human experience takes place in the happy marriage between nature and artifice, between landscape and city. In fact Hilversum binds its existence to the bucolic beauty of the natural and rural landscape, which is a coveted place to rest and a place of pleasures for painters and poets at the end of the century.

By claim of novelty we refer to the progress that coincides with the arrival of the railroad, the novelties that advance and enter into the life of the city, influencing the shape and dynamics of growth. From now on the factories and

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2 “The country is flat, and so is the city. There’s nothing cooler, neatlest, prettiest, most elegant of these cities. From far, with their countless canals with the tree-lined banks, they appear as many combined fractions; you always have the impression of being in the countryside and that the surroundings were created during the night by a magic wand” Diderot, D. (1773). In: Sozzi, L. (1989). Denis Diderot, Viaggio in Olanda, 38. Como-Pavia: Ibis.
the homes of the masses become part of the evolutionary process of the city accelerating the transformation process.

**Figure 1. Plan of Hilversum**

The social changes at the base of the new demands of the community, as predictable as they are, constitute a significant factor in the production process of the form. Although the main motive is the pursuit of monumentality\(^1\). In other words the characterization of the shape starting from its cultural value.

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\(^1\)“Monumentality is the purest expression of the human sense of harmony and order. It is an expression of the creative mind that has calibrated a hierarchy of values and is therefore able to express these values in a clear and then indelible way. (...) Monumentality means: order sublimated in meaningful form. When the monumentality is understood in this way, you get to the deeper meaning of the word and recognize the values that have been tested for centuries.” Dudok, W. M. In: Japelli, P. & G. Menna (1997). *Willem Marinus Dudok. Architetture e Città 1884-1970*, 30. Napoli: Clean.
So, social changes represent the motive of the plan making new buildings, fit into compliance with the pre-existing environmental and historical circumstances, with whom we are obliged to find continuity.

It is true that the design of the form does not appear as the result of a naive repetition of the forms of the past. Only the claims of novelty appear resolved in the radicalism of forms that have no link with the tradition, that is, in the idea of a spontaneous planning or the imposition of patterns or international arrays detached from the history of the city and its inhabitants. Rather, the urban plan pursues a third option: the conciliatory alternative which refers to the ability of the project to interpret the vital energies of the tradition in a new and non-formal sense, that is, the availability of the project to bring its own energy as new nourishment to the perpetuation of their vitality.

There is no doubt that the urban form of the city of Hilversum is indebted to an ancient link with the medieval urban tradition. The formal structure of the plan announces in the picturesque grouping and in the free disposal of the parties, only apparently random, that the principle of representation which belongs to the Dutch representative culture and, more generally, of the Nordic people. However, we can speak of tradition, crossing the limits imposed by the local objective reality, even when we look at the idea of city as proposed by the European rationalist tradition, filtered by the urban experience in the construction of the space gained by architect Hendrik Petrus Berlage in implementing the plan of South Amsterdam. But there are echoes to the English urban conceptions of the garden city, revisited in the light of the Dutch experience. At the beginning of the nineteenth century, they were part of the most lively National Dutch tradition.

Monumentality as Aspiration

The plan of Hilversum was compliance with the character of the pre-existing city. The signs of the ancient past, the formal structure of the medieval framework and the environmental characteristics are perpetuated in the new form. So the picturesque city fades into the modern city. However, the new brings with it the experience of the city of South Amsterdam, whose monumental character it interprets. So the picturesque character is added to the

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2 Two essential forces make up the tradition: one is the vertical, permanent rooting of the phenomena to the places, their objective reason of consistency, the second is the circular, dynamic connection of a phenomenon to another, through the changing intellectual exchange among men (...). Nathan Rogers, E. (1958). *La responsabilità verso la tradizione*. In: Nathan Rogers, E. (1958). *Esperienza dell'architettura*, 299. Torino: Giulio Einaudi Editore.

3 “A good development plan must be carried out in harmony with the character of the city. A plan without character is not a plan. It is the urbanist’s task to express this character very clearly.” Dudok, W. M. In: Japelli, P. & G. Menna (1997). *Willem Marinus Dudok*, 77, cit.
monumental aspiration in a city that, was devoted to resort center, is about to become a modern and democratic provincial town.\(^1\)

The cultural reference in South Amsterdam shows as the monumental is achieved with a principle of order in the organization of urban space that, in the simplicity of the road layout, in the ritual of the building type, hierarchical balance between public and private buildings, organized in an organic and alive way, defines the classical style of the city. The pattern of the urban buildings that establish a close reciprocal relationship with the lay-out of streets and roads, in a unified whole,\(^2\), that is associated with the dispositive frame of the plan, is not just the result of a regulatory system with a functional value or the result of a composition that takes good care of the practical aspects of real life, but the way to show the public spirit in the spatial structure.\(^3\) The idea of "unity in diversity", theorized by Berlage, is fulfilled here, and finds full expression in the creation of autonomous parts that are harmoniously linked by a nexus of democratic collaboration in the overall composition. So the city is understood in its material concreteness and urban planning coincides with the architecture that fully expresses itself in the art of building space: "the construction of our days, which gives rise to entire neighborhoods, entire parts of the city as an act of joint creation, makes it possible to see in urbanism, first of all, the art of space".\(^4\).

Understanding that could certainly flourish on the example of the plane in South Amsterdam, but that found confirmation even before that in Wright’s revolutionary concept of space, in the idea of space developed by the School of Amsterdam.\(^5\) It is clear that the many cultural contributions of the twentieth

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\(^1\)“The beauty is based on the best examples of a romantic random variation, which often in the past also gained special picturesque qualities (...). We do not deny the value of this at all, but a city created as a single great work of creation should not lose in its architectural appearance, his way of being (...). In contrast to the color, the familiarity and the intimate beauty of the old romantic city, all this leads to a colder and higher architecture beauty that can still be very poetic. This is the poetry of the classical image.” Dudok, W. M. In: Japelli, P. & G. Menna (1997). *Willem Marinus Dudok*, 77, cit.


\(^3\)“The architecture is the harmonic organization of the space needed to humanity and to the community.” Dudok, W. M. In: Japelli, P. & G. Menna (1997). *Willem Marinus Dudok*, 31, cit.

\(^4\)“The architectural forms are the means by which the sense of space is expressed.” Berlage, H.P. In: Van Bergeijk, H. (1985), 195, cit.


\(^6\)Although united by a similar thought in considering the city as a place of manifestation of civic and collective values, expressed in exemplary way in the construction of public space, (Berlage and de Klerk) seem to be divided in the way of understanding the construction of the form. To Berlage the form appears as the result of a logic of internal constitution and that expresses its contents into the formal completeness that characterizes it. The construction of the urban space relies on a method that starts from the study of the housing cell into its constituent parts to arrive to the definition of the block house, in the crystal-clear evidence of the constructive logic, till the characterization of the urban morphology. The rigor and order of the Berlage’s formula are opposite to the method of de Klerk who imagines to shape the form through a reverse process that works from the outside to the inside. It will be the public space.
century “isms” to which the work of Dudok refers to and the modern historiography has shown, are not to be understood in a strictly linguistic, but in their contribution from the point of view of spatial characterization.

**Structure and Form of the Plan**

The expansion of the Hilversum plan develops from a crucial issue that has fed and still feeds the contemporary debate. In other words how to control the irrational growth of the city into the virgin territory of the countryside. Particularly for the city of Hilversum, since the natural landscape is an environmental value worth being preserved. Urban growth starts from the premise of developing the intrinsic potential of the natural landscape within the city. Not so much through the provision of parks distributed in a scattered and isolated fashion, in the best tradition of Anglo-Saxon, French or German, but in an organic whole, where the green, intimate mediation between road and home, becomes an integral part of the entire urban pattern. Finding the highest expression in a green band which surrounds the city in an unlimited way. Thus defining the urban limits and suggesting, perhaps, the lost image of the traditional closed city. The plan also accepts the model of the medieval formal structure of which it develops the potential from the design of the irregular layout of the roads. This is the backbone of the new residential districts and the industrial plants, they do not develop according to the functionalist principle of zoning, but in the harmonious integration of housing, industry and urban green spaces. The distribution of the buildings in space and time is not programmed *a priori*. The reference to an operative method that allows the control of the chaotic growth of the city - in constant evolution - through the planning “by areas” is clearly recognisable. The logic is that of a program plan which is extremely flexible to the needs of the community, respectful to the environmental and has historical values, in a structure where the general form is the overall driving factor capable of giving meaning to the individual parts. Within this logic, the construction by parts defines individual residential neighbourhoods, each with its own functional autonomy, but in formal relationship with the other parts of the city. So, the principle for the design of the districts is based on the autonomy and the search for a fair reciprocal relationship with the other parts of the city.

The solution of the residential neighbourhoods of the working class is in continuity with the typological studies of the best Dutch tradition that comes from the study of human cell progresses to the definition of the unit of the neighbourhoods, to the morphological characterization of the entire city. The morphological and typological study of the districts marks a point of arrival to impose the construction of the building block and the representation of the urban front, of which it is expression, to force the content and internal structure, supporting in this way the desire for freedom of expression in the urban façade.” Dalla Caneva, A. (2012). *L’immagine della città nell’invenzione dell'edificio di massa da Hendrik Petrus Berlage a Michel de Klerk.* Padova: Cleup.
about the problem of social housing which arises in Holland with the Woningwet (Housing Bill, 1902). A decisive turning point that, with its key role in the process of the improvement of social housing, reflected the social, economic and productive achievements in the country. The intervention of the municipality with the preparation of implementing tools, was supported not only by the economic but also the legislature of the central government, the direct participation of cooperatives and building societies coordinated by the municipal administration and the strong and healthy pragmatism of Mrinus Willem Dudok in the institutional capacity as Head of the Public Works, formed the choral premise for the achievement and realization of the entire building plan.

The formal structure of the district is moving the boundary between the traditional idea of the compact city and the experience of the garden city. Of course there is an obvious debt towards the Anglo-Saxon culture in reference to the theory of the garden city, but it is more an affinity that an explicit formal reference. The residential neighbourhoods are closer to the idea of the court block proposed by Berlage in the South Amsterdam plan, rather than the idea of a house surrounded by greenery. As in the Berlagian residential block unit the general idea of the courtyard type is re-evoked, but interpreted in the light of the picturesque and romantic character of the location. This means the repetition, according to the principle of alternation of repetition and variation, of brick houses, two stories with a pitched roof, merged to the perimeter of the block in order to constitute an expressive front facing towards the street. Thus finding a close analogy with the Berlagian idea of the traditional and compact city. The city in Dudok’s mind does not propose the chance of unpredictable shapes, but seems to be living inside the mirage of the historical city whose formal structure still seems to provide certainty to the flow of the rhythms of human life in the twentieth century. The road network has a fundamental role in the definition of the formal structure of the residential neighborhoods. The arrangement of the pattern of the buildings is organized by a triple hierarchical system of roads that provide adequate permeability between one side and the other. From an order of the main roads, which fixes the limits of the neighbourhood within the city, you go to a subsystem of roads that organizes neighbourhoods into blocks, until you come to a further warping of road that leads to the houses inside the block. The research moved by Dudok towards a refinement of collective housing is measured by instances of social progress made by the Dutch social-democratic thought. The improvement of the material and spiritual life of the working class is a prerequisite to deliver to the society not only practical but also beautiful social housing. All this is

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1“The beauty of a city is not accidental, it is not the effect of a gamble: it is based on the appropriate and well-balanced alternation of repetition and variation”. Dudok, W. M. In: Japelli, P. & G. Menna (1997). Willem Marinus Dudok, 77, cit.

2“The facades of the houses and even the facades of several blocks must fulfill a dual function: they must first stop the mass construction behind, clarifying its structure, and secondly, they must enclose the space of the street, allowing it to express itself in its organic compactness.” Berlage, H.P. In: Van Bergeijk, H. (1985), 198, cit.
expression of a conception of architecture as a true and real social art at the service of the people.

The Primary Role of the School in the Construction of Urban Space

Certainly the public buildings that make up primary urban facts in the composition of the city have a key role in building up the site of residential neighborhoods. In this sense we can understand the many school buildings that Dudok realized for the city of Hilversum. Essential tools for the operation of the entire district, hinges around which life in the residential complex takes place, they represent the new centres of democratic life and social life. Places destined to the cultural development of the community, for this reason take on the urban role and social significance that once were entrusted to the city's main public buildings such as the town hall or the church. In other words, focal points, the pivot of the whole district and composition of the entire city, which appear not so much as the result of a sterile ritual and mimetic and formal repetition of the forms belonging to the tradition, but the discovery of an "invention of design" that measures, from time to time, the capacity of the project- hence its validity-to build urban scenarios able to meet the demands of life posed by society. Therefore, no reference to a well-established typological form, inadequate to express the social and architectural changes, but interpretation of ancient forms still considered valid to represent the instances of their time. So the old fades in the new stratifying the forms with meanings and values that, for this reason, find an ancient link with the memory and history of the city.

The most authentic medieval tradition creeps in the intimacy of the project when composing urban spaces through a clear exposition of functions to the urban public. That is, when the proportions of the space, with its symbolic values, are realized according to a procedure that moves from the inner conception. Through this finding a close analogy with the concept of space gained by Wright and assimilated in the Netherlands through the work of Hendrik Petrus Berlage.
But the Middle Ages manifest its presence in the playful asymmetrical composition of the parts, only seemingly arranged in a random fashion, but in fact the result of a rigorous and balanced arrangement of parts in close relationship with the city forms that arise from the true desire to build the urban spaces that is appropriate to the life of the community. Therefore, the project is the result of the rigorous arrangement and articulation of the parts in a composition "balanced and mature, proper exposure of civilian architecture, which arises from the need to represent spaces through volumes."\(^1\)

The reference to stylistic elements belonging to different linguistic trends or schools of architecture is only secondary and, if it reveals a specific

sensitivity of Dudok to the contamination of different cultural influences belonging to the contemporary fashion, it arises from the need to find a formal characterization of the facade. It is certainly an important need, but not a definitive one in the construction of urban space which is rather reached through plain-volumetric articulation. The succession of schools that, in turn, quickly leaves behind and burns the linguistic stages of a maturity that it has just reached, is proposed as a model that experiments the project's ability to organize and to envisage the urban context, while respecting the historical context and the existing environment.

It is a real cultural and programmatic attitude that finds a first solution in the design of Geraniumschool, 1916-1918 (figure 2). The harmonic structure of the entire residential structure is in close relationship with the existing church in the country and the project of the new school. So much that the church and school are the symbolic centres that organize the layout of streets, squares and residential building context in a structure that is articulated but unitary and gives a monumental character to the entire complex.

The reference to the classical aesthetics is also evident in the clear hierarchical organization of the parts, each of which is equipped with the recognizable form that ensures autonomy, identity and variety although in severity of a unitary composition. The school is characterized by a strict classical structure and stands as an array of development not only of the district where it is inserted, but also of the subsequent neighbouring quarters. According to the logic of planning whereby the new urban pattern connects to the previous and prefigures the next. In this sense, we can interpret the district where the Oranjeshool is, 1921-1923 (figure 3). The school, the fulcrum of the entire composition, binds to Geraniumschool, with which it finds continuity through the axis of the Lupinestraat. The shape and arrangement of the school stem from the need to build public spaces in the neighbourhood, the very square on
which the residential building also stands, thus giving the urban space that image of the traditional city. The volumetric hinge of schools, often is organized around a tower, real urban emergency, it is also a compositional choice for Rembrandtschool, 1917-1920 (figure 4), the Bavickschool, 1921-1922 (figure 5, 12), the Nassau School, 1927 (figure 7), or the Vondel School, 1928 (figure 10). Unlike in Geraniumschool or Oranjeschool, the formal characterization here is not tied to a sophisticated linguistic solution, but it relies on the rhythmic and plastic articulation of pure volumes. Where the formal simplification aspires to clarity of the meaning and value, and the omission of the detail is understood by virtue of clear understanding, in a monumental sense, of the masses resulting from the structural scheme: "I missed decorative details more and more superficial and unnecessary. The masses resulting from the structural scheme should not in themselves constitute the ornament and produce plastic effects so meaningful to make the decorative details unnecessary."¹. The architecture leads itself in the realm of recognizing a few essential elements, sublimated in beauty through the proportions and the order that define not only the material but also the spiritual character: "The monumentality is the purest expression of the human sense of harmony and order² that allows you to find symbolic encryption in architecture. That is the new-found sense of civic passion. Aligning itself with this Berlagian way of thinking, Dudok endorses the idea that beauty cannot be reflected in simple forms and that a monumental can only be born in close relationship with the forms of construction³. In this way, the wall in the composition of the space does not lose its character even when different figurative languages, from the Amsterdam School to Neo-plasticism, tend to depersonalize its tectonic consistency in favour of an expressive composition of surfaces. The formal asceticism finds its greatest expression in the last works carried out, such as Calvijnschool, 1929 (figure 11) or Lorentzschool, 1929-1930 (figure 9), or the SnelliusSchool, 1930-1932 (figure 8) which pose as a final outcome of a spiritual path that inevitably leads to simplicity. The urban composition shows its complexity in the implementation of the school complex Jan Van Der Heydenschool, 1925-1927 (figure 6). Triptych of schools built in chronological order according to a single project that realizes the validity of an experimental model, born according to the logic of open composition by parts, to build urban spaces intended as gathering places of community life. The formal structure is

³ In the theoretical writings, Hendrik Petrus Berlage, cf. Architecture as a Social Art, does not fail to remind us how the great architectural epochs have pursued the style because they were guided by a unifying collective consciousness. In the name of this common goal the art could become monumental and not just beautiful because animated by the discovery of the true principles of construction: "Now, the architecture is and remains the art of building, the union of different elements into a whole to close the space. (...). In order to do so, in a rather free way, we should do it in the easiest way". That is to say that the space should be honesty exposure of building forms. Berlage, H. P. (1905). Thoughts on Style In: The Getty Center for the history of art and humanities (1996). Hendrik Petrus Berlage-Thoughts on style 1886-1909. Santa Monica: The Getty Center Publication Programs.
based on the use and assembly of simple typological models that demonstrate the ability to organize complex spaces through the parsimony of a few reasons.

**Figure 8. Snellius School, 1930**

**Figure 9. Lorentz School, 1930**

**Figure 10. Vondel School, 1928**

**Figure 11. Calvijn School, 1929**

The aforementioned schools as the Lorentzschool or Snelliusschool also lean towards these results. Here the plastic articulation is resolved in a peaceful and serene composition of simple box-shaped volumes that solve, so only apparently simple, the relationship between the buildings and the city. It is true that the horizontality the volumes have to the ground contrasting with the verticality of the urban tower, refers to the "plain character" (Denis Diderot) of the Dutch landscape at times broken by the presence of vertical towers and steeples.
The search for the appropriate form of context in which it is inserted through a subtle balance between tradition and modernity, even when the use of materials does not refer to the functional dictatorship of the International Style by imposing universally valid materials such as plaster or exposed concrete. Rather, the whiteness of the volumes of the International Style is contaminated by brick, in several arrangements telling about the medieval tradition in Holland.

Conclusions

The architect Willem Marinus Dudok has developed, as an expansion plan of Hilversum, a formidable system in which public buildings play a primary role in the construction of the city.

At the heart of the method from which the urban layout originates, the idea of the city as a homogeneous artifact is identified, and its layout is achieved through the recognition of the invariant elements: the plan (road network) and the type of buildings (neighbourhoods).

The neighbourhood is an elementary part of the city, the road network is the generator of the urban shape.

The school within the neighbourhood is a remarkable urban feature because it is a public building around which the residential buildings are organised.

In all this, the construction of the town designed by Dudok is an integration of consolidated tradition that interprets the city as a place of representation, a sort of large open-air theatre where a public building, as an institution, makes its own civilian role recognisable.

Bibliography