English Translation

Introduction

OverHolland presents a wealth of architectonic research regarding the typo-morphological study of the city as well as the issue of architectonic interventions in Randstad cities. The first part of this series published in October 2004 explored this issue. The second part, which lies before you, begins with 'Mapping Randstad Holland', a study that has literally 'mapped' the urbanization of the Randstad area since 1850. It is the first step in a study that provides insight into the urbanization of the Randstad area as a morphological phenomenon not only by looking at the big scale of the whole, but also at the smaller scale of the combined parts.

'Mapping Randstad Holland' is meant as an overview using cartography as an excellent means of providing insight into urbanization as a physical and spatial phenomenon. Both the article and the maps make use of a simple parameter: the expansion of the built-up city area. In order to provide insight into the time dimension of the urbanization process a 'morphological periodization' was used based on four kinds of municipal fibre that are recognisable in the different Randstad cities as clearly distinguishable city areas. In the text, the most recent developments of the Randstad cities are addressed from the broader perspective of the system of towns in the areas around the North Sea. To correct the image found in professional circles special attention was paid to the expansion of the municipal use of ground. Using tables and diagrams an attempt was made to provide insight into this phenomenon.

'In search of an overview' is also the motto of Reinout Rutte's contribution about the birth of the town in the Netherlands during the Middle Ages from the eleventh to the fifteenth century. Using a 'three-pole model' for his research into the urbanization, Rutte came up with a classification of nine groups of cities, which can be distinguished by the mix of factors that lie at the base of their urbanization. Then, the issue of whether the difference in these nine groups can also be found in the city maps was also addressed. Here, Rutte makes use of the city maps of Jacob van Deventer from around 1560. The approach brought forth in this study seemed important to us for producing 'Mapping Randstad Holland' at the individual city level. Rutte has therefore produced a follow-up study called 'Groei en krimp in de Hollandse stad van de veertiende tot de negentiende eeuw' (Growth and decrease in the Randstad from the fourteenth to the nineteenth century), which will be published in the next issue of *OverHolland*.

The starting point for the studies in *OverHolland* is that Dutch cities are not structurally determined, but increasingly led by design activities and therefore by architectonic and urban development proposals. This is true for the cities people want to build as well as for the cities people want to avoid building. It is precisely this hypothesis that connects the typo-morphological study with that of the architectonic interventions in the cities of the Randstad. In this respect the Master workshop 'Urban Architecture' of the Department of Architecture at the Delft University of Technology presents a few possibilities for giving a new impulse to the available areas in the city of Delft where the railway, shunting yard and factories can be found with constructions and public spaces in an innovative architecture. The belief is that interventions that are limited in reach have the power of anticipating developments that cannot yet be anticipated. In this issue a few results are presented in the form of three graduate projects.

Finally, under the heading 'polemen' François Claessens reports on the international conference 'The European City', which took place in Delft and Antwerp in October 2004. As well, Ed Taverne has critical comments for the most recent developments in planning land, whilst Leen van Duin distances himself from modern-day traditionalism in a book review of Hans Ibelings' *Unmodern architecture*.

Mapping Randstad Holland

Henk Engel*

In 'Mapping Randstad Holland' the urbanization process in the Randstad Holland region is presented in four stages: 1850 (map 002a), 1940 (map 003a), 1970 (map 004a), and 2000 (map 005a). On each map the state of urbanization is shown by an indication of the built-up area and the different infrastructure systems: waterways, railways, thoroughfares and streets. In the atlas, the last map shows the situation in 2000, a situation that forms the sediment of the four consecutive urbanization phases.[1]

A division into 'morphological periods' was chosen, based on the four kinds of urban fabrics that can be found in the cities of the Randstad.[2] These types are still clearly recognizable today in specific town districts: the 'canal town' is characteristic for the period till 1850, the 'town of streets and building blocks' for the period between 1850 and 1940, the 'open town with green belts and built-up areas' for the period between 1940 and 1970, and the 'cluster city' for the period after 1970.

A first version of parts of these maps was made for the study 'De naoorlogse stad. Een hedendaagse ontwerpopgave'[3] ('The post-war city. A contemporary design assignment'). The completion of the maps was part of the research programme 'Urban Architecture' in the Department of Architecture, Delft University of Technology. This research focussed on the interaction between urban morphology and building typology. From a theoretical point of view the emphasis is on possible connections between urban analysis and architectonic design. Since urban renewal and restructuring of the existing towns are the most important tasks at present and in the near future, an adequate understanding of the areas under consideration is of vital importance.

In practice, 'Mapping Randstad Holland' can serve as a framework for more detailed studies of the individual towns.[4] The maps of the Randstad therefore are not only a first step in the research that should provide more insight into the Randstad as a phenomenon by looking not just at the overall picture, but also at the lower scale levels of the composite parts. As a first step in linking the studies on a regional scale and the urban analysis of individual towns, data on population figures have been collected from nine cities that have traditionally been the most important: Amsterdam, Haarlem, Leiden, the Hague, Delft, Rotterdam, Dordrecht, Gouda, and Utrecht. The sites of the built-up areas have been calculated with the help of the maps (see tables).

Urban development and cartography

Urban development is as much bound by *the conception of the earth's surface as by the surface of the earth itself.*
J.M. de Casseres, 'Stedebouw en kaartenwetenschap' ('Urban development and cartography'), 1927

In the field of urban research 'Mapping Randstad Holland' is an attempt to further develop a specific 'Delft' method of urban analysis. The Delft urban research can best be described as a cartographical method. The interest in cartography is mainly of a professional nature. In 1927 De Casseres, one of the pioneers of modern urban development in the Netherlands, wrote:
'There is much common ground between urban development and geography. Both

have the earth's surface as their subject and the changes which man has made upon it through the centuries belong to the most important components of the geographical as well as the urban development research. From this close connection, which links these sciences to the earth's surface, it follows that the drawn representation thereof is one of the most significant tools in the work of the geographer and urban developer'. [5]

De Casseres divides the 'urban development and cartographical work' into two groups: 'the survey maps' and 'the actual urban development project'.[6] Through the nature of urban development work, designs for urban expansions, urban restructuring and regional plans are recorded in the form of maps. Indispensable is:
'the presence of good topographical material, kept meticulously up to date, complete with accurate contour lines [...] – the essential condition for each urban development job, the lack of which makes a rational draft plan impossible'. [7]

The major part of De Casseres' article from 1927 is dedicated to the state of the topographical material in different European countries and their suitability for urban development work. Reliability of the surveys and the scale of the cartographical representation determine the usefulness of the maps for what is sometimes called the 'technical survey': the assessment of the physical condition of the plan area, concentrated on soil composition, drainage, current land use and ownership, and building stock. In these maps topography is only a means to reflect the results of statistical research on, for instance, population density and situation of ownership.

In addition to the technical survey another form of urban development research is considered necessary, particularly during De Casseres' time, the 1920s: 'the socio-economic survey'. The objective of the socio-economic survey is to 'predict' future developments. In relation to this De Casseres points out the work of the urban development researcher Van Lohuizen, at the time employed by the Public Housing Department of the city of Rotterdam. In 1924 Van Lohuizen carried out a pioneering study on behalf of the International Urban Development Congress in Amsterdam for a regional plan for the area of South-Holland West. The maps of the 'Urban sphere of influence Holland-Utrecht', which Van Lohuizen made for this study, presented for the first time a picture of what later would be called 'Randstad Holland'.[8]

Van Lohuizen is the founder of urban development research in the Netherlands. In 1928 he was appointed urban development researcher for the city of Amsterdam. From 1929 together with architect-urban developer Van Eesteren he worked on the preparation of the 'Algemeen Uitbreidings Plan' (AUP) (General Expansion Plan). When CIAM placed the city on the agenda for its Fourth Congress in 1933, Van Eesteren was able to offer the study groups from the different countries a method of comparative urban analysis based on the survey of the AUP. Three survey maps of Amsterdam were given as an example to the country groups: map 1, scale 1:10,000, showed data about living, working and recreation; map 2, also scale 1:10,000, showed data about traffic; and map 3, scale 1:50,000 depicted the urban sphere of influence and gave a summary of the data of all four categories. At least three maps were made for the congress according to an agreed-upon legend of 33 cities, including Amsterdam, Rotterdam, The Hague and Utrecht.[9] In 1935 the results of the CIAM study were exhibited in the Netherlands in Amsterdam's Stedelijk Museum.

The method was directed towards visualizing abstract data with regard to urban land use. In that respect it was closely related to the method of picture diagrams which Otto Neurath had developed with the help of the graphic artist Gert Arntz for the Gesellschafts- und Wirtschaftsmuseum (Social and Economic Museum) in Vienna.[10] The method was an attempt to involve Neurath in the preparation of the Fourth CIAM Congress where Neurath gave a lecture on the use of picture diagrams at the meeting in Athens: 'L'urbanisme et le lotissement du sol en représentation optique d'après la méthode viennoise'. Neurath was given an important role as non-architect for drawing up the conference report, which sadly did not amount to much.[11]

Despite Neurath's criticism on the symbols the CIAM used and the way in which statistical data was represented with the help of maps, a new dimension was added to the Viennese method by using exact maps: the graphical method developed from a powerful pedagogical instrument for the representation of scientific knowledge to a scientific instrument as such. By linking the numeric data of the different urban 'functions' directly to the surface and position of the town, the maps produced new data about distances, density, etc. The maps made it possible to represent the town as a system of functionally related variables.

After World War II Van Lohuizen (1947) and Van Eesteren (1948) were appointed extraordinary professors in Delft at the Architectural Department. By teaching the new main subject of Urban Development they devoted themselves to the unity of design and research, 'the unity of urban development', such as they had developed during their work on the AUP. At the same time Ter Kuile was appointed professor of Architectural History. At first these appointments may seem to have little in common, but the arrival of Van Lohuizen, Van Eesteren and Ter Kuile gave the initial impetus to urban development and historical research in Delft.[12]

At that time Ter Kuile was participating in the compilation of an ambitious overview of Dutch architectural and urban development history. In 1948 the first volume of *Duizend jaar bouwen in Nederland* (A thousand years of building in the Netherlands) was published, and the second volume was published in 1957. This work was not a great success, but for the development of urban research in Delft, the contributions of the town historian Fockema Andreae should be mentioned explicitly. In the introduction of the second volume of *Duizend jaar bouwen in Nederland*, Fockema Andreae refers to the enormous wealth of Dutch maps. He considers this source material of exceptional importance for the research on the city's history.

Fockema Andreae also refers to the importance of 'historical reconstructive maps' and mentions the initiative of the International Historical Congress in making historical town atlases, which could serve as a basis for comparative urban research.[13] In the first volume of *Duizend jaar bouwen in Nederland* Fockema Andreae had already made clear which specific approach he had in mind for a Dutch contribution to this project. In this volume he proposed the theory that the condition of the subsoil in the province of Holland has constantly been a decisive factor for the shape and articulation of the cities in the Randstad. The extraordinary condition of the subsoil requires well-considered choices at every stage of the development of the cities in the Randstad.

According to Fockema Andreae, the common distinction in foreign urban development literature between 'grown' and 'founded' towns does not apply to the 'Dutch water city': 'In a country where buildings of any significance can only be built on specially prepared building land, random growth is not really possible.' 'This is not only true for the time when the town was closed off from the countryside by moats, walls or ramparts and gates, and when building outside these town boundaries was discouraged, also after the disappearance of these external characteristics, the natural condition of the building land still had the same influence, even with the possibilities of modern technology. This is the reason that even today the cities in the province of Holland still stand out sharply against their surroundings, so that it is common to arrive suddenly from a polder landscape into a city.' [14]

From this point of view the importance of what was earlier referred to as the 'technical survey', the assessment of the physical condition of the plan area, becomes much broader. The developments that present themselves as necessary from the socio-economical survey are confronted with the material limitations and the social and cultural inertia of the existing town landscape. It is only due to this confrontation that the forms of urban development are understandable and planning is possible. In England this deepening of the technical survey had already been developed in the 1950s in a systematic way by the geographer M.R.G. Conzen, educated in Berlin.

The morphological research by Conzen defines the dynamic relations between ground plan, development, and use. With this Conzen stripped the common notion of 'townscape' from its merely scenographic significance, as well as the global typology of towns, which was used in socio-economical research of urbanization processes, and replaced them by an accurate set of instruments that provide insight into the urban transformations. Conzen's work is 'the geographical counterpart' of the Italian urban research that was developed by architects at that time. For our research of the urbanization of the area of the Randstad from 1850 the systematic set-up of Conzen's latest studies is particularly important: 'Zur Morphology der Englische Stadt im Industriezeitalter' (About the morphology of the English city in the industrial age).[15]

Historical town atlases

'The familiar is that which we are used to, and what we are used to is the most difficult to 'know', which means that to see as a problem, as strange, as far, as 'outside ourselves'...
Friedrich Nietzsche, *The Gay Science*, 1882

The hidden logic of urban development in the low-lying part of the Netherlands that Fockema Andreae pointed out entails that for the analysis of the cities in the Randstad much importance is given to the research of the pre-urban landscape. Furthermore, the pre-urban landscape in the province of Holland is not simply a natural fact, but an artefact in itself. It is the product of the reclamations of the river delta. The special cultural significance of this can best be understood when seen through somebody else's eyes. One of the oldest descriptions of the Dutch coastal area comes from Plinius:
'Twice a day the ocean comes in with huge masses of water over an immeasurable distance and covers the land that is in an eternal contest with nature and it is not clear if it belongs to the mainland or to the sea. The poor people there live on high mounds.'[16]

Since the 9th century this landscape has been reclaimed and five centuries later numerous cities have developed here. The combination of the polder landscape and the dense network of cities have since made a completely different impression. This 'contested area' between land and water had been changed into something legendary. In 1760 a visitor from Geneva wrote that 'in the province of Holland everything is artificial, even the countryside and nature.' Some years later a traveller from Spain even noted that 'it is fantastic and poetic rather than real.'[17]

In Delft, J.C. Visser took the first step towards the development of historical cartography in his dissertation on Schoonhoven.

Visser's study starts from the 'Cadastral Minute Plans' from the beginning of the 19th century. In the Netherlands these are the first 'large-scale' maps that represent the essential elements of the town layout in a recognizable and measurable way. On the basis of these maps (scale 1:2,500) and the maps by Van Deventer of around 1560, Visser reconstructed the different stages in the development of Schoonhoven. The 'Topografische en militaire kaart van het Koninkrijk der Nederlanden' ('Topographical and military map of the Kingdom of the Netherlands') (scale 1:50,000, surveyed around 1850) was used as a third source for the reconstruction of the surrounding, pre-urban landscape. Data from a broad range of written sources were located and verified by means of these cartographical sources.[18] Subsequently, this method was the basis for the *Historische stedenatlas* (Historical towns atlas).

The *Historische stedenatlas* is a project of the International Commission for the History of Towns that was established at the end of the 1950s by the International Historical Congress. J.F. Niermeyer and S.J. Fockema Andreae were members of the commission for the Netherlands.[19] Initially, 20 Dutch cities were selected, of which Utrecht, Amsterdam, Haarlem, Leiden, The Hague, Delft, Rotterdam, Dordrecht and Gouda are also important historical centres in the area of the present Randstad. Only after 1980 did seven new editions appeared, of which only one concerns a city located in our area of research: Haarlem. The documentation method used for the *Historische stedenatlas* is, however, still exemplary. For each town the atlas provides about ten maps, which together form a good basis for research on early urban development.[20]

Two kinds of maps hold the key to any research on the history of a Dutch town. The first ones are the town maps by Jacob van Deventer of around 1560, made by order of King Philip II; 225 have been preserved. These maps (scales varying from 1:7,500 to 1:8,500) are less detailed than the Cadastral Minute Plans, but accurately surveyed. They are therefore invaluable as a source for the degree of urbanization at the end of the Middle Ages, just before the second urbanization wave in the 17th century.[21] The second kind of map is a specially made reconstruction of the town plan at the beginning of the 19th century on a scale of 1:2,500 (based on the Cadastral Minute Plans), where previous developments are projected. These maps document the degree of urbanization just before the most recent urbanization movement, which is characterized by large urban expansions and radical changes in the historical centres.

The maps are accompanied by a brief history of the formation and development of the town in question and a description of a) public buildings, b) fortifications and mills, c) religious institutes (monasteries) d) churches and chapels, and e) charitable institutions. The maps provide a perfect documentation of 'the architecture of the town', as described by the Italian architect Aldo Rossi in his book of the same name. The primary elements, the topography and the monuments (public works), as well as the residential areas have been sketched in and are readable at a glance.[22]

The range of the *Historische stedenatlas* is however limited to the time of the pre-industrial towns. In the 1980s three studies were published, which tried to transcend this limitation each in its own way: *Binnensteden veranderen* (Innercities change) by Rutger Smook (1984), *Amsterdam als stedelijk bouwwerk* (Amsterdam as an urban structure) by Casper van der Hoeven and Jos Louwe (1985) and *Rotterdam. Verstedelijkt landschap* (Rotterdam. Urbanized landscape) by Frits Palmboom (1987).[23] *Binnensteden veranderen* is an 'atlas of the spatial change process of Dutch inner cities in the last century and a half'. Whereas the *Historische stedenatlas* finished with the first Cadastral Minute Plans of around 1820, Smook used these maps as a starting point for the describing of the physical changes that have taken place since then. His atlas contains maps and descriptions of 36 Dutch towns, 11 of which are located in our area of research.

Binnensteden veranderen is motivated by the ambition to preserve the historical urban structures.[24] The other studies grow out of different interests. These are studies that map and try to define the morphological discontinuities in the town plan as we know it today. *Amsterdam als stedelijk bouwwerk* shows a remarkable continuity in the development of the urban fabric up until 1850. Even the first urban expansions at the end of the 19th century do not result in large changes in allotment and housing typology. However, the main structure is no longer determined by canals, but by streets. This new type of urban fabric was codified after the Housing Act of 1901 in the 'architectonic model' of the Berlage's town planning. The General Expansion Plan (AUP) by Van Eesteren and Van Lohuizen (1936) broke with Berlage's urban architecture of closed building blocks and provided the model for the urban expansions after the World War II. The 'open town planning' of Van Eesteren is actually not less architectonic than Berlage's model. It was not until the end of the 1960s that the explicit relationship between the different movements in town planning and schools of architecture came to an end.[25] Since then urban development has become a toy of planning targets and marketing strategies.

The book *Rotterdam. Verstedelijkt landschap* focuses on infrastructure on a regional scale, and also shows a strong continuity in the form of urbanization. This continuity, based on a close connection between urban allotment and pre-urban reclamation, was severed by the advent of new traffic systems. The radical shift from transport across water to transport across land by railways and motorways had an impact on the entire urban structure, even in the oldest districts. The town walls were demolished, some canal sections were filled in and paved and breakthroughs were made in the construction of large arterial roads. The historical inner cities were then incorporated into the new traffic system. Smook's study shows that the historical centres in most Dutch towns have gone through a complete reorientation, as a result of the connection to the railway network and later on, to the motorway network.

Amsterdam als stedelijk bouwwerk and *Rotterdam. Verstedelijkt landschap*, as well as the different volumes of the *Historische stedenatlas*, focus on a specific town. An important goal of the urban studies of CIAM and the *Historische stedenatlassen* was to lay the foundation for comparative urban analysis. Such analysis requires maps made according to standard procedures.[26] The selection of towns is equally important. In our research we deal with a group of towns, which today form an important conglomerate. Moreover, these towns share many morphological characteristics, which will be further defined in the research. The towns in this group have significant differences as well, not only with regard to their total size, but also with regard to the size of the districts originating from the different stages of urban growth.

A better insight into these differences is only possible if the development of the individual towns is seen as part of one and the same urbanization process. With this in mind a special section was set up by Rudolf Steiger, Wilhelm Hess and Georg Schmidt, called 'Versuch einer grafischen Darstellung der historischen Entwicklung des Siedlungs- und Städtebaus' at the Functional Town exhibition in Amsterdam in 1935, where the research of CIAM IV was presented. However, this representation of the global urbanization process was very schematic. No attempt was made to link the studies of the different towns with the global overview and this part of the exhibition was cancelled at the demand of Walter Gropius.[27]

Excellent research in the area of economic history and historical geography has been carried out since. The work of Braudel of the French Annales group and the related work of De Vries and Van der Woude have uncovered new ground for the study of the urbanization of the Netherlands.[28] An important tool in the study is the map that Visser made for the second edition of the *Atlas van Nederland* (Atlas of the Netherlands) in 1984. For this Visser used the working method of the socio-economic survey in order to map the period in which no population figures were known. In recent studies Visser thankfully uses the data collected.[29] (Visser's map is shown here as map 001.)

Network of towns

'I found it very difficult, and still do, to recognize the fact that how things are called is much more important than what they are. […] It suffices to create new names and valuations and probabilities in order to create new 'things' in the long run.'
Friedrich Nietzsche, 'The Gay Science', 1882

With six million inhabitants the Randstad is currently the most densely populated region in the Netherlands. About 40% of the Dutch population is concentrated in this area. The total area of the Randstad can be compared with such urban conglomerates as London, Paris and Milan. The difference is that the Randstad is not centred on one dominant city. The four largest cities in the Randstad, Amsterdam (727,053 inhabitants), The Hague (440,743 inhabitants), Rotterdam (592,665 inhabitants) and Utrecht (232,718 inhabitants), are relatively small. In terms of governance the Randstad is a colourful array of approximately 35 cities, scattered across three provinces and eight to ten water boards. In contrast with classic metropolises such as London, Paris or Milan, the Randstad is a cluster of towns, a network of cities and towns, of which about 25 developed from historical centres.

The operational significance of the Randstad lies in the field of national spatial planning. The name 'Randstad' is in fact a recent invention, intended to put the provinces of Holland and Utrecht on the map as a metropolis. In 1750 Amsterdam still took fourth place in the ranking of large European cities, after London, Paris and Naples. In 1850 the capital of the Netherlands had dropped to 16th place, and eventually ended up in 25th place in 1950. The Randstad would have made 7th place in the ranking of 1950. The Netherlands would have suddenly counted again, an important factor when it comes to attracting international companies and institutions. At that time the Randstad did not have an internationally recognized name. That did not come until the 1960s.

The story goes that Albert Plesman, the founder of KLM, introduced the name 'Randstad'. It is said that around 1930, flying over the province of Holland, Plesman was the first person to recognize the potential qualities of the urban landscape in the province of Holland. What he saw was 'a circle of large and medium-sized towns, interconnected by a highly advanced infrastructure and clustered around a central open space, which consisted mainly of agricultural land, unspoilt nature and areas for recreational activities'.[31] Arnold van der Valk expressed the suspicion that Plesman did not come up with this idea out of thin air, but rather from seeing the earlier-mentioned maps of Van Lohuizen of the Urban sphere of influence Holland-Utrecht. After the International Urban Development Congress in Amsterdam these have been on display on different occasions.[32]

If the latter story of the origin of the Randstad is true, then it is a convincing confirmation of the fact that maps are not only a tool for urban development work, but also serve in particular as an imaginative tool. In the words of De Casseres urban development is as much bound *'by the conception of the earth's surface as by the surface of the earth itself'*.[33] Nevertheless, the maps of Van Lohuizen were above all meant to point out the dangers of an unbridled urbanization. They supported regional planning, which would have to steer urbanization in the right direction and prevent the negative consequences of metropolization.

The name 'Randstad', which Plesman associated with the view from the aeroplane or with the maps of Van Lohuizen, brings the positive side of the urbanization process to the fore, like the possibility of establishing a prominent airport. It is the name which made the image of a metropolis conceivable. It might therefore be more thanks to Plesman than Van Lohuizen that the Randstad was proclaimed to be an alternative model for metropolization in the 1960s.

In 1966 in *The World Cities* the English geographer Peter Hall praised the advantages of the polycentric structure of the Randstad metropolis in relation to the traditional, monocentric world cities: 'At this moment, it seems almost certain that the Dutch solution offers the right model for most of the still-growing world cities.'[34] In spite of the spatial planning policy that until quite recently frustrated the realization of an actual Randstad metropolis, the virtual reality of the Randstad has considerably contributed to the fact that Randstad Holland is currently put on an equal footing with other prominent urban regions in Europe.

Since then it has been common practice to associate the special characteristics of the Randstad with the structure of the earlier pattern of urbanization. In 1525 the province of Holland was already the most highly urbanized part of the Netherlands. Some 44% of the population lived in towns, even though the towns were quite small. Between 1400 and 1550 the towns took on the familiar shape from the maps of the geographer Jacob van Deventer. When we look at the distribution of the towns at the time, we see clearly that the foundation for the development of the Randstad was laid during that period. In 1560 the area now called the Randstad encompassed all the towns of the province of Holland and two-thirds of the towns with more than 10,000 inhabitants in the Netherlands. Just as today the urban population was spread over many larger and smaller towns, none of which had a dominant position.

De Vries and Van der Woude have pointed out, however, that this situation was only typical for the first half of the 16th century: 'The remarkable thing about the area of the future Republic is that around 1525 it could not yet be called a centre of international economic activity.'[35] Antwerp was the centre of international trade during this period. Henry Pirenne hit the nail on the head with his remark that when Antwerp was the centre of European trade, the Netherlands became 'the suburb of Antwerp'.[36] A hundred years later the situation had changed fundamentally. The centre of world trade had now shifted to Amsterdam. In 1675 the degree of urbanization had increased to 61% and the network of towns in the Randstad shows a distinct hierarchy with Amsterdam at the top, the metropolis of the 17th century.

With this fact in mind the polycentric structure of the Randstad, praised by so many authors, must be reconsidered. To understand the historical development of the Randstad conglomerate it is essential to conceive it as a network of larger and smaller towns, a fact requiring some explanation. Just as 'structure' became a fashionable word in the 1960s and 1970s, so now does 'network' appear increasingly since the 1990s. Networks are everywhere and this word has even become accepted as a verb. Here, the notion of a 'network of towns' has a strict meaning. In recent literature about urbanization processes 'network' is used to indicate a group of towns with mutual relationships as opposed to the 'system of central places'. This is a theoretical model that was developed by the German geographer W. Christaller in the 1930s to explain the distribution of towns.[37]

At the centre of the 'system of central places' is the role a town plays as centre of amenities, as market place, administrative centre, etc., for a more or less extensive surrounding area. The towns have different levels of amenities, resulting in a hierarchical system of towns with at the top a large town which functions as the central place for the central places at lower levels. Such a system of towns, together with its service areas, forms a region. Christaller believes that if one dismisses the geographical differences and differences in population density, all systems of towns will display the same structural characteristics, that is, the same regular, geometrical, urban pattern of distribution and a hierarchy of towns that can be expressed in all cases in fixed proportions of their respective sizes.

According to Christaller, the systems of towns show mutual differences due to specific geographical circumstances: they disrupt the regular distribution pattern and the population density of the region in question, which in turn determines the actual number and the size of the towns and the distances between them. Despite this fact, further research revealed remarkable variances, even in the system of towns of Southern Germany on which Christaller had based his theory. The present research explains these variances from the point of view of interregional trade and has introduced the term 'network system', indicating a system of towns not bound to a territory.[38] By nature, networks of towns are unstable: trade routes are redirected and dominant economic centres, the metropolises, change.[39]

One could argue about which of the two systems deserves primacy in the process of the birth of a town. Hoppenbrouwers notes that 'it is extremely difficult to verify what exactly gave the decisive impetus to the eventual urbanization of the province of Holland, and when this happened. There is indisputably a relation with the peat reclamations and the ensuing structural changes in agriculture, which in the long run discharged more labour than it attracted.'[40] Here, Hoppenbrouwers refers to the subsidence of the peat reclamations, which in due course made agriculture impossible and forced people to switch to cattle farming. As a result of this change the province of Holland became dependent on the imported grain and the development of a production and export network for it. In regard to the further development of the towns in the area of the current Randstad it was essential that during successive periods these towns belonged to network systems that extended far outside the area: so much so, that the system of towns itself in the province of Holland should be considered a network in which mutual relationships between the towns are not fixed. Changes in the long-distance trade and relocation of the trade routes through the area have brought about changes in the system of towns several times. This does not change the fact that the cities in the area of the current Randstad have also functioned as central places and are still fulfilling that role. However, this explains the distribution pattern of the towns no more than it does their size, as the urbanization of the area of the Randstad has to be looked at from a broader perspective.[41]

De Vries and Van der Woude distinguish four large urbanization movements in the second millennium with regard to the areas along the North Sea coast. During the first movement the most highly urbanized area was situated in Flanders and Brabant (Bruges, Ghent, and subsequently Antwerp, 14th-16th century). As for the second movement, the centre shifted to the north, to Holland (Amsterdam, 17th century). Then, during the third movement, the centre shifted to England (London, 18th and 19th century). The centre of the fourth and up till now the last urbanization movement from 1870 could be found in Germany (the Rhine-Ruhr area).[42] The formation and development of the towns in the Randstad has taken place within the scope of these four urbanization movements.

The urbanization of the area of the current Randstad has not been a steady process. The hierarchy of the nine most important cities in the area of the Randstad, which can be established based on the number of inhabitants, has changed quite a few times during the five centuries between 1300 and 1800 (see: table 007). The hierarchy in 1400 corresponds with what De Vries and Van der Woude called the first urbanization movement. The towns in the province of Holland and Utrecht were located within the periphery of Flanders. The favourable location between four economic centres formed the basis for the first flourishing of the towns in the province of Holland. Many new towns emerged, including the polder towns of Rotterdam, Gouda and Amsterdam, whilst existing towns expanded. Two shipping routes were important, namely the east-west line, between London and Cologne, and particularly the north-south line between the Hanseatic towns and Flanders. At that time Utrecht was the largest town, followed by the towns in the province of Holland, which did not differ much in size.

In the hierarchy of 1670, which corresponds to the second urbanization movement, the hierarchy of 1400 is completely reversed. Amsterdam was now the centre of world trade and at the top of a network of towns in which hierarchy and specialization had emerged. Besides Amsterdam, Rotterdam became a major trade centre, and Leiden and Haarlem were the most prominent industrial towns. The coherence of the network of towns was secured by the expansion of a system of inland waterways and regular barge services. During the 17th century Amsterdam, Leiden and Rotterdam underwent several expansions. The expansion plans for Haarlem and Utrecht that were drafted at the end of the 17th century came too late. Delft and Gouda did not expand during this time. Their more modest growth was accommodated within the medieval town walls.

Towards an anatomy of the Randstad

'If people had not built churches, architecture would still be in its infancy. The tasks that man set himself based on incorrect assumptions (for instance, that the soul can dissociate itself from the body), have given rise to the highest forms of culture. The 'truth' is incapable of providing such motives.'
Friedrich Nietzsche, 'Posthumous fragments', 1876-1877.

In the urbanization process of the area of the Randstad it is impossible to pinpoint an exact moment between the first and the second urbanization movement where transition of the order of the first system of towns into the order of the second period took place. If we then look at the development of the current system of the Randstad, we see that at the beginning there is a clear cut-off point, which is the result of the third urbanization movement. The hierarchy of the nine towns in the area of the Randstad showed a complete reshuffle in 1795. The third urbanization movement was a period of economic stagnation for the Netherlands. Many towns in the province of Holland went through a period of

serious depopulation, with the lowest point at the beginning of the 19th century.

Although Amsterdam held its ground in terms of population, the economic structure of the urban network lost its coherence. Wagenaar and Engelsdorp Gastelaars have pointed out that 'the decline of small towns such as Gouda, Delft, Leiden, Haarlem and Enkhuizen, which saw the collapse of their export-based manufacturing, was concurrent with the increasing dominance of Amsterdam in the area of trade and particularly financial services'.[43] The de-urbanization of Holland brought with it a contraction of the economic activity in the centre, making Amsterdam, with its population of 221,000, more dominant at the end of the 18th century than during its most flourishing period. Rotterdam followed in second place with less than a quarter of the inhabitants of Amsterdam (see table 006).

Around 1800 all that was left of the urban network in the province of Holland was the system of waterways that remained the only traffic system till late in the 19th century. As for military and defence, the region of the future Randstad remained intact from the 17th century as a territorial entity. The Holland Water Line (the strip of land on the eastern edge of Holland that could be flooded as a defence measure) formed the cornerstone of the 'Fortification Holland'. Although by nature invisible, the Water Line was seen as a reliable borderline until the German bombers simply flew over it in 1940 on their way to Rotterdam.[44] The idea of the 'Randstad' came at the right time to replace the obsolete concept of the 'Fortification'.

This brings us to the fourth urbanization movement, the actual subject of the study of 'Mapping Randstad Holland'. At first it seems that during the fourth urbanization movement no more important changes took place in the hierarchy of 1795 which was established during the period of stagnation after the second peak of urbanization (see table III). The structure of the urban network in the province of Holland appears to be stable and to be growing only in a quantitative sense. When looking at the exact population figures it is clear that the monocentric urban network of the 18th century was disappearing fast (see table 008).

There are two main changes. First of all there was a reshuffling of the towns in the lower region of the hierarchy. However, that does not mean very much. More important is the fact that, besides the five towns with a population of between 60,000 and 150,000, another 15 towns of similar sizes emerged in the area of the Randstad (with an average of 90,000 inhabitants). In addition, 20 towns appeared with a population of between 30,000 and 60,000 (average 40,000 inhabitants). Today almost half of the population of the Randstad, 2.6 million inhabitants live in these 40 smaller towns. The other half live in the four large cities of Amsterdam, Rotterdam, The Hague and Utrecht. Here, at the top of the hierarchy, the second large change, compared to the beginning of the 19th century, took place.

Amsterdam lost its dominant position. Amsterdam and Rotterdam are now almost equal in size and the difference in population of The Hague and Utrecht compared to those of these two cities has become much smaller. In short, the urban network in the province of Holland has become polycentric. The advocates for the Randstad model see this as an original configuration of a new kind of metropolis. The polycentrism of the urban network in the province of Holland could, however, just as well imply that Holland in our time, to paraphrase Pirenne, functions again as a suburb, not of Bruges or Antwerp, as in the 14th and 15th century, but of the economically powerful Rhine-Ruhr area.

Just as in the 16th century this situation could form the start of metropolitan developments in the near future.[45] It is however doubtful that the large urban expansions, which have taken place since the 1970s point in that direction. These urban expansions have little to do anymore with an increased number of inhabitants. At the end of the 1960s the prognosis that in the year 2000 the population of the Netherlands would have risen to 20 million inhabitants had to be adjusted. The most recent estimation is a population of 17 million people in 2035 and a shrinkage that will set in from that moment. The urban expansions after 1970 are largely the result of a drop in the average housing occupation.

The built-up surface of the nine towns examined (the sum of the 'built-up centres') has become 22 times larger than it was 150 years ago. This increase is almost to the same extent determined by the population growth as well as by extensivation – thinning-out – of urban land use (see table 009). The combined number of inhabitants of these towns in 2000 is almost equal to that in 1940. For this group of towns it is therefore easy to see what the contribution of the extensivation of land use is with regard to the expansion of urban territory.

The extensivation of land use is a phenomenon that is difficult to fathom. Detailed research of individual towns will hopefully lead to a better understanding. In any case, three factors are important here: the development of specialized working areas, larger housing lots and the decrease in the average housing occupancy. The first two factors are not new and they are not the products of modern functionalism in urban development. De Pater mentions 'unmixing, scattering and thinning' processes which have played a part during every period of urban development.[46] The decrease in the average housing occupation to the extent we know today is, however, a new phenomenon.

For the Netherlands as a whole half of the expansion of the housing stock during the period of 1850 till 2000 served to absorb the population growth. The other half came about through the decrease in average housing occupancy. If this decrease had not taken place, the entire expansion of the housing stock during the period of 1970-2000 would have been unnecessary. This expansion amounts to 43% of the housing stock in 2000.

The decrease in the average housing occupancy did not set in until after 1910. Until that year there was even an increase of 4.5% in 1850 to 4.9% in 1910. During the period of 1910 till 1940, it dropped to 4.2%. This was partly cancelled out during the war year. The trend continued after the war. In 1970 the average housing occupation had dropped to 3.4%.[47] In the meantime, the decrease in housing occupation had become a familiar phenomenon. A reduction in housing shortage and the diminishing of family size are direct causes.[48]

During the period after 1970 it would appear that a remarkable phenomenon takes place. The population growth starts to drop while at the same time the decrease in the average housing occupancy persists. In fact, both factors go hand in hand: smaller families lead to a reduction of population growth as well as to a decrease in housing occupancy. What is easily overlooked, however, is that the effect of the decrease in average housing occupancy is related to the total housing stock. The capacity of the existing housing stock diminishes; and as this stock becomes larger, the demand for more houses will increase. The large increase in housing stock after 1970 is a masterly final chord to the population growth, which started at the beginning of the 19th century and is only now coming to an end.

During the period 1970-2000, 70% of the expansion of the housing stock resulted from the decrease in housing occupancy, and only 30% due to the population growth (see diagram 011). At the same time, the number of inhabitants per hectare in the already-existing urban areas dropped by 30%, undermining the basis of amenities such as schools and shops. If after the period of reconstruction and economic prosperity there is talk of an urban crisis in the 1970s, then these are some of its aspects.[49]

These crisis symptoms are clearly visible in the group of nine cities, which we shall study in more detail. Of these towns the four smaller cities, Dordrecht, Leiden, Delft and Gouda, are the ones that were still growing during the period 1970-2000. The number of inhabitants of the five larger cities, Amsterdam, Rotterdam, The Hague, Utrecht and Haarlem has decreased in that same period. To use words like 'exodus' or 'flight from the city' seems inappropriate. Dissatisfaction with the town as a living environment could have played a role, but there was no question of vacancy. On the contrary, there were and still are long lists of house seekers. It simply seems that the housing stock capacity of these towns was reduced, so that they no longer had enough ground available to expand the built-up area. In many cases the only hope was offered by industrial and harbour areas falling vacant, which could be used for building houses.

It is clear that the implications of the consecutive stages of urbanization cannot be read in the way that one would read a map. The maps presented here show the successive expansions of the built-up area of the towns and the different infrastructures that have been added. The nature of the development in the different urban expansions and the interventions in town districts built earlier can only be made visible by means of analyses of the individual towns. Nobody can ignore the fact that the production of Dutch towns since the Housing Act of 1901 has been led on all levels by design activities, and therefore by architectonic and urban development representations of the towns that one wanted to create as well as of the towns one wanted to prevent.

However tempting it may be, we shall not hazard any predictions. We intend to map accurately the blueprint of the urbanization movements in the individual towns within the province of Holland. That way we hope to get a better understanding of life in these settlements and the urban landscape they form. With Otto Neurath we think that a visual representation is a powerful tool for transferring scientific knowledge. We also appreciate, together with many others who are active in this field, the earlier maps and drawings as important sources of material. For these reasons, we feel that an 'Atlas of the Randstad Holland' is the best way to present our research.

Notes

* The maps and diagrams of this article were made by Iskandar Pané, Olivier van der Bogt, and Otto Diesfeldt.

1. These maps were presented at the exhibition 'Drawings of the City' (27 October-27 November 2004), as part of the EAAE conference 'The European City' in Delft.

2. M.R.G. Conzen, 'Zur Morphologie der Englische Stadt im Industriezeitalter' (About the morphology of the English city in the industrial age), in: H. Jäger (ed.), *Probleme des Städtewesens im Industriellen Zeitalter* (Problems for towns in the industrial age). Cologne 1978, pp. 8-9.

3. Ad Hereijgers, Endry van Velzen et al., *De naoorlogse stad. Een hedendaagse ontwerpopgave* (The post-war city. A contemporary design assignment). Rotterdam (NAi) 2001.

4. For this purpose there is an abundance of recent historical urban studies available: Arie de Klerk, *Bouwen aan de Hofstad. De geschiedenis van het bouwtoezicht in Den Haag, in sociaal en cultureel perspectief* (Building the capital city. The history of building inspection in The Hague from a social

and cultural perspective). Delft (DUP) 1998; Wim Denslagen (ed.), *Gouda. De Nederlandse monumenten van geschiedenis en kunst* (Gouda. The Dutch monuments of history and art). Zwolle (Waanders) 2001; P.H.A.M. Abels, *Duizend jaar Gouda. Een stadsgeschiedenis* (A thousand-year history of Gouda). Hilversum (Verloren) 2002; R.E. de Bruin, *'Een paradijs vol weelde'. Geschiedenis van de stad Utrecht* ('A paradise full of luxury'. History of Utrecht). Utrecht (Matrijs) 2000; *Geschiedenis van Rotterdam* (History of Rotterdam) in two parts: Arie van der Schoor, *Deel 1. Stad in aanwas* (Part 1. Growing town). Zwolle (Waanders) 1999 and Paul van der Laar, *Deel 2. Stad van formaat* (Part 2. Town of standing). Zwolle (Waanders) 2000; Paul T. van der Laar and Mies van Jaarsveld, *Historische atlas van Rotterdam* (Historical atlas of Rotterdam). Amsterdam (SUN) 2004; W.F. Heinemeijer, M.F. Wagenaar et al., *Amsterdam in kaarten. Verandering van de stad in vier eeuwen cartografie* (Amsterdam in maps. Changes of the city in four centuries of cartography). Ede/Antwerp (Zomer & Keunig) 1984; Marc Hameleers (ed.), *Kaarten van Amsterdam 1866/2000* (Maps of Amsterdam 1866/2000). Bussum (Thoth) 2002; *Geschiedenis van Amsterdam* (History of Amsterdam) in three parts: Marijke Carasso-Kok (ed.), *Deel I. Een stad uit het niets* (Part I. A town from nothing). Amsterdam (SUN) 2004; Willem Frijhof and Maarten Prak (ed.), *Deel II-1. Centrum van de wereld 1578-1650* (Part II-1. Centre of the world 1578-1650). Amsterdam (SUN) 2004, *Deel II-2. Zelfbewuste stadsstaat 1650-1813'* (Part II-2. Self-assured state city 1650-1813). Amsterdam (SUN) 2005.

5. J.M. de Casseres, 'Stedebouw en kaartenwetenschap' (Urban development and cartography), in *Tijdschrift voor volkshuisvesting en stedebouw* (Magazine for public housing and urban development), 8, no. 4, April 1927, pp. 85-96. As no other in the Netherlands De Casseres was in the 1920s well aware of the development of the urban development discipline in Germany, France and England. See Koos Bosma, *J.M. de Casseres. De eerste planoloog* (J.M. de Casseres. The first planner). Rotterdam (010) 2003.

6. J.M. de Casseres, 'Stedebouw en kaartenwetenschap' (Urban development and cartography), p. 94.

7. J.M. de Casseres, *Stedebouw* (Urban development), Amsterdam 1926, p. 219.

8. The maps are printed in a small format in G.A. van Poelje, *Gewestelijke plannen* (Regional plans). Alphen aan den Rijn (Samson) 1925. For the work of Van Lohuizen and his contribution to teaching in Delft, see Arnold van der Valk, *Het levenswerk van T.K. van Lohuizen 1890-1956* (The lifework of T.K. van Lohuizen 1890-1956). Delft (DUP) 1990.

9. Martin Steinmann, *CIAM: Dokumente 1928-1939* (CIAM: Documents 1928-1939). Basel/Stuttgart (Birkhäuser) 1979, pp. 114-170; Elwin A. Koster, 'Stadsmorfologie. Een proeve van vormgericht onderzoek ten behoeve van stedenbouwhistorisch onderzoek' (City morphology. A taste of design oriented research of historical urban development research), (dissertation). Groningen 2001, pp. 122-123.

10. Martin Steinmann, *CIAM: Dokumente 1928-1939* (CIAM: Documents 1928-1939), p. 122; Kees Broos, 'Beeld statistiek: Wenen – Moskou – Den Haag 1928-1965' (Image statistics: Vienna, Moscow, The Hague 1928-1965), in: Gerd Arntz, *Kritische grafiek en beeldstatistiek* (Critical graph and image statistics). Nijmegen (Haags Gemeentemuseum (The Hague Municipal Museum)/SUN) 1976, pp. 45-61; Umberto Barbieri and Cees Boekraad, *Kritiek en ontwerp* (Criticism and design), Nijmegen (SUN) 1982, p. 25. In which is referred to P. Alma, 'Beeldstatistiek en sociologische grafiek' (Image statistics and sociological graphs), in *Wendingen*, no. 9, 1930; P. Alma, 'Beeldstatistiek' (Image statistics), in *de 8 en Opbouw*, no. 19, 1932, pp. 189-190; O. Neurath, 'Beeldstatistieken van het Geselschafts- und Wirtschaftsmuseum te Wenen' (Image statistics from the Museum of Society and Economics at Vienna), in *de 8 en Opbouw*, no. 19, 1932, pp. 191-194.

11. Willem K. Korthals Altes, 'Otto Neurath. Ruimtelijke planning en wetenschappelijke wereldconceptie' (Otto Neurath. Spatial planning and a scientific conception of the world). (post-graduate paper, not published) Amsterdam 1987. A version of this paper: A. Faludi, 'What is positivism anyway? Otto Neurath and the planners', in: *Werkstukken van het Planologisch en Demografisch Instituut van de Universiteit van Amsterdam* (Papers from the Planning and Demographics Institute of the University of Amsterdam), no. 102. Amsterdam 1988. In the study performed by Korthals Altes the difference between Neurath's planning conception and that of the CIAM architects is emphatically highlighted. Neurath is depicted as the front-runner of the scenario planning, which was introduced at the end of the 1980s by the 'Stichting Nederland Nu als Ontwerp' (Nederland Now as Design Foundation) and was implemented as a method during the preparation of the fifth policy document on urban planning.

12. About the history of education in urban development, landscape architecture and planning: P. de Ruijter, *Stedebouw-onderwijs 1900-1945* (Urban development education 1900-1945). The Hague (NIROV) 1983. After a long preparation, urban development as a main subject in Delft could be started in 1947. According to De Ruijter the introduction of this new main subject occurred at the same time as a reorganisation of the civil engineering department. However, this extended further than the introduction of urban development. Apart from the appointments of J.H. Froger (ir.), T.K. van Lohuizen (ir.) and C. van Eesteren for the discipline of urban development there were also the appointments of H.G. van Beusekom (dr. ir.) as professor in Public Housing, J.H. van den Broek (ir.) in Architecture and E.H. ter Kuile (dr.) in the History of Architecture. Furthermore, the teachings of van Bijhouwer for Garden Art and C. Rijsinge (dr.) for Knowledge and Preservation of Landscapes must also be mentioned.

13. S.J. Fockema Adreae, E.H. ter Kuile (prof. dr.) and R.C. Hekker, *Duizend jaar bouwen in Nederland* (A thousand years of building in the Netherlands) Part 2. Amsterdam (Allert de Lange) 1957, pp. 13-14.

14. S.J. Fockema Adreae, E.H. ter Kuile (prof. dr.) and R.C. Hekker, *Duizend jaar bouwen in Nederland* (A thousand years of building in the Netherlands) Part 1. Amsterdam (Allert de Lange) 1948, p. 44. The approach of Fockema Adreae had a following: Gerald L. Burke, *The making of Dutch towns*. London 1956: 'It is shown earlier that the western regions of the Netherlands have always been in state of instability – now increasing as a result of reclamation of sea, lake, river or marsh, now decreasing as a result of inundation. [...] The development of towns in such circumstances could not, as often elsewhere in Europe, be casual or fortuitous: it had to proceed as a conscious, regulated expansion in accordance with a detailed plan' (p.33) and 'The scattered city' could never be typical of the Netherlands; in a country where it is impossible to erect an important building except on a site specially prepared for it, sporadic growth is out of the question' (p. 34). See also Audry M. Lambert, *The making of Dutch landscape*. London, 1971.

15. M.R.G. Conzen, *Zur Morphology der Englische Stadt im Industriezeitalter* (About the morphology of the English city in the industrial age), (see note 2), pp. 1-48; Ed Taverne, 'Inleiding op een historiografie van de stedengeschiedenis in de Nederlanden' (Introduction to a historiography of the history of towns in the Netherlands), in: Ed Taverne and Irmin Visser (ed.), *Stedebouw. De geschiedenis van de stad in de Nederlanden van 1500 tot heden* (Urban development. The history of the city in the Netherlands from 1500 to the present). Nijmegen (SUN) 1993, pp. 21-23; Anne Vernez Moudon, 'Getting to know the built landscape: typomorphology', in: Karen A. Frank and Lynda H. Schneekloth, *Ordering Space*. New York 1994, pp. 289-311; Koster, *Stadsmorfologie* (Town morphology) (see note 9).

16. Plinius, *De wereld* (The world). Amsterdam (Athenaeum – Polak & Van Gennep) 2004.

17. Cited in Fernand Braudel, *Beschaving, economie en kapitalisme (15de-18de eeuw), Deel III, De tijd en de wereld* (Civilization, economy and capitalism: 15th-18th century, Part III, The time and the world). Amsterdam (Contact) 1990, p.168 (original French edition 1979).

18. J.C. Visser, *Schoonhoven. De ruimtelijke ontwikkeling van een kleine stad in het rivierengebied gedurende de Middeleeuwen* (Schoonhoven. The spatial development of a small town into the river area during the Middle Ages). Assen 1964. See also J.C. Visser, 'Gouda, de wording van een polderstad' (Gouda, the birth of a polder town), in: *Historisch Geografisch tijdschrift* (Historical Geographic Magazine), 12, 1994, pp. 37-52. At the end of the 1960s the interest in the use and production of maps among students in Delft was greatly stimulated by the reconstructions of the pre-industrial urban landscape in the Netherlands of Pjotr Gonggrijp. Only a small number of these reconstructions, which were based on the first 'Topografische en militaire kaart van het Koninkrijk der Nederlanden' (Topographical and military map of the Kingdom of the Netherlands) (surveyed around 1850, scale 1:50,000), have ever been published: Peter Gonggrijp, 'De straat en het landschap' (The street and the landscape) in: Tjeerd Deelstra, Jan van Toorn and Jaap Bremer (ed.), *De straat, vorm van samenleven* (The street, a form of coexistence). Eindhoven (Cat. Van Abbemuseum) 1972, pp. 78-82. See Crimson, *Re-Urb, nieuwe plannen voor oude steden* (Re-Urb, new plans for old towns). Rotterdam (010) 1997.

19. G. Herwijnen, 'Historische stedenatlas van Nederland. Probleemstelling, doel en werkwijze' (Historical town atlas of the Netherlands. Problem definition, objective and work method), in: *Ad Fontes. Opstellen aangeboden aan prof. dr. C. van de Kieft* (Ad Fontes. Papers offered to C. van de Kieft (prof.dr.)). Amsterdam 1984, pp. 445-459; P.J. Magry, P. Ratsma and B.M.J. Speet, *Werken met kaartenmateriaal bij stadshistorisch onderzoek* (Working with map material for town history research). Dutch Studiën 20, Hilversum, 1987; Anngret Simms and Ferdinand Opll, 'Historische Städteatlanten: Stadtgeschichte in Karten' (Historic Town Atlases: Town history in Maps), in: *Siedlungsforschung. Archäologie – Geschichte – Geographie* (Settlement Research. Archeology, History, Geography), 15, 1997, pp. 303-325; Koster, *Stadsmorfologie* (Town morphology) (see note 9), pp. 123-129.

20. The first four instalments of the *Historische stedenatlas* (Historical towns atlas) were edited by G. van Herwijnen, C. van der Kieft, J.C. Visser and J.G. Wegner: B.M.J. Speet, *Part 1, Haarlem*. Delft (DUP) 1982; B.M.J. Speet, *Part 2, Amersfoort*. Delft (DUP) 1982; M.M. Doornink-Hoogenraad, *Part 3, Zutphen*. Delft (DUP) 1983; B.M.J. Speet, *Part 4, Kampen*. Delft (DUP) 1985. The following three instalments were edited by P.A. Hendrikx, P.H.D. Leupen, J.C. Visser and J.G. Wegner: J.C. Visser, T.M. Elsing, P.A. Hendrikx, J.G. Wegner, *Part 5, Schoonhoven and Nieuwpoort*. Delft (DUP) 1990; Frans Hermans, *Part 6, Venlo*. Delft (DUP) 1999; Willem A. van Ham, *Part 7, Bergen op Zoom*. Delft (DUP), 2003. The maps in all the instalments were produced by T. Rothfusz.

21. See note 12.

22. J.C. Visser, 'De waarde van de stedenatlas

van Jacob van Deventer voor de topografie van de laat-middeleeuwse stad' (The value of the towns atlas of Jacob van Deventer for the topography from the late medieval town), in: *Beiträge zur Wirtschafts- und Stadtgeschichte. Festschrift für Hektor Ammann* (Contribution to industrial and urban history. Commemorative volume for Hektor Ammann). Wiesbaden 1965, pp. 116-123; J.C. Visser, 'Introduction', in: C. Koeman and J.C. Visser (ed.), *De stadsplattegronden van Jacob van Deventer* (The town maps of Jacob van Deventer). Alphen aan den Rijn 1992; Aldo Rossi, *L'architettura della città*. Padua, 1966. Dutch translation: *De architectuur van de stad* (City Architecture). Nijmegen (SUN) 2002.

23. Rutger A.F. Smook, *Binnensteden veranderen. Atlas van het ruimtelijk veranderingsproces van Nederlandse binnensteden in de laatste anderhalve eeuw* (Innercities change. Atlas of the spatial change process of Dutch inner cities in the last century and a half). Zutphen (Walburgpers) 1984; Casper van der Hoeven and Jos Louwe, *Amsterdam als stedelijk bouwwerk* (Amsterdam as urban structure). Nijmegen (SUN) 1985; Frits Palmboom, *Rotterdam, verstedelijkt landschap* (Rotterdam, urbanized landscape). Rotterdam (010) 1987; Maurits de Hoog and Rudy Stroink, 'Review, Amsterdam als stedelijk bouwwerk. Analyse van een methode' (Review, Amsterdam as an urban structure. Analysis of a method), in: *Oase*, 10/11, pp. 5-13, provides a good overview of typo-morphological studies in Delft around 1980.

24. *Binnensteden veranderen* (Innercities change) offers a wealth of information. The reproduction of the maps is, however, rather coarse. In this respect the case study of Delft by Rein Geurtsen is a much better example. Rein Geurtsen, *Locatie Zuidpoort Delft. Stadsmorfologische Atlas* (Location Zuidpoort Delft. Urban Morphological Atlas). Delft (DUP) 1988.

25. J.A. Kuiper, *Visueel & dynamisch. De stedebouw van Granpré Molière en Verhagen* (Visual & dynamic. Urban architecture by Granpré Molière and Verhagen). Delft (DUP) 1991, pp. 141-147. The term 'architectonic model' is used as defined in: J. Castex, J.-C. Depaule and P. Panerai, *De rationele stad. Van bouwblok tot wooneenheid* (The rational town, from building block to housing unit). Nijmegen (SUN) 1984, p. 202.

26. M.R.G. Conzen, 'The use of town plans in the study of urban history', in: H.J. Dyos, *The study of urban history*. London (Edward Arnold) 1968, pp. 113-130; M.R.G. Conzen, 'A note on the historic towns atlases', in: *Journal of Historical Geography*, vol. 2 (1976), no. 4, 1976, pp. 361-362; T.R. Slater, 'De European historic towns atlas', in: *Journal of Urban History*, vol. 22 (1996), no. 6, pp. 737-749.

27. Steinmann, *CIAM: Dokumente 1928-1939* (CIAM: Documents 1928-1939), (see note 9), pp. 170-171.

28. Braudel, *Beschaving, economie en kapitalisme (15de-18de eeuw)* (Civilization, economy and capitalism: 15th-18th century), in particular: Part III (see note 16); A.M. van der Woude, 'Demografische ontwikkeling van de Noordelijke Nederlanden 1500-1800' (Demographic development of the Northern Provinces of the Netherlands 1500-1600), in: *Algemene Geschiedenis der Nederlanden* (General History of the Netherlands) 5. Bussum 1980, pp. 102-168; Jan de Vries, *European urbanisation 1500-1800*. London 1984; P.M. Hohenberg and L.H. Lees, *The making of urban Europe 1000-1950*. Cambridge Mass./London (Harvard Un. Press) 1985; M. Wagenaar and R. van Engelsdorp Gastelaars, 'Het ontstaan van de Randstad, 1815-1930' (The origin of the Randstad 1815s-1930), in: *K.N.A.G. Geografisch Tijdschrift* (Geographic Magazine), 20 (1986) no. 1, pp. 14-29; Ben de Pater, 'Van land met steden tot stedenland. Een kleine historische stadsgeografie van Nederland' (From a country with cities to a citified country. A small historical city geography of the Netherlands) in: *Historisch Geografisch Tijdschrift* (Historical Geographical Magazine), 7 (1989) no. 2, pp. 41-56; Sako Musterd and Ben de Pater, *Randstad Holland. International, regional, local.* Assen (Van Gorkum) 1992; Jan de Vries and Ad van der Woude, *Nederland 1500-1815, de eerste ronde van moderne economische groei* (The Netherlands 1500-1815, the first round of modern economic growth). Amsterdam (Balans) 1995.

29. A. Thurkow et al., *Atlas van Nederland. Deel 2: Bewoningsgeschiedenis* (Atlas of the Netherlands. Part 2: Habitation history). The Hague 1984, map 16. For an extensive explanation, see: J.C. Visser, 'Dichtheid van de bevolking in de laat-middeleeuwse stad' (Density of the population in the late medieval town), in: *Historisch Geografisch Tijdschrift* (Historical Geographical Magazine), 3 (1985), pp. 10-21. Visser's map is included here as map 001. Recent studies that make use of these maps: Hans Renes, 'De stad in het landschap' (The town in the landscape) and Reinout Rutte, 'Stadslandschappen. Een overzicht van de stadswording in Nederland van de elfde tot de vijftiende eeuw' (Town landscapes. An overview of the birth of the town in the Netherlands from the 11th to the 15th century), both in: Reinout Rutte and Hildo van Engen (ed.), *Stadswording in Nederland. Op zoek naar overzicht* (Birth of the town in the Netherlands. In search of an overview). Hilversum (Verloren) 2005. Rutte's study is also included in this edition of *OverHolland*. The second part of this study, about growth and shrinkage of the towns in the province of Holland, will be published in the coming edition. For more recent estimates of urban population figures, see: Piet Lourens and Jan Lucassen, *Inwoneraantallen van Nederlandse steden ca. 1300-1800* (Population figures of Dutch towns around 1300-1800). Amsterdam (NEHA) 1997. These figures were used for tables I and II.

30. P.M. Hohenberg and L.H. Lees, *The making of urban Europe 1000-1950*, (see note 26), table 7.2, p. 227.

31. See note 22.

32. Arnold van der Valk, *Het levenswerk van Th.K. van Lohuizen 1890-1956* (The lifework of T.K. van Lohuizen 1890-1956), (see note 8), pp. 50-62. Special about Plesman: p. 60. See also Musterd and De Pater, *Randstad Holland*, (see note 26), p. 1.

33. J.M. de Casseres, 'Stedebouw en kaartenwetenschap' (Urban development and cartography), (see note 5), pp. 85-86.

34. Peter Hall, *Zeven wereldsteden* (originally *The World Cities*). Amsterdam (World Academy, De Haan/Meulenhoff) 1966, p. 97 and pp. 120-121. See also Gerald L. Burke, 'Greenheart Metropolis'. London, 1966; Hans van der Cammen (ed.), *Four Metropolises in Western Europe*. Assen/Maastricht (Van Gorkum) 1988, pp.120-121; Hans van der Cammen and Len de Clerk, *Ruimtelijke ordening, van grachtengordel tot Vinex-wijk* (Spatial planning, from a ring of canals to Vinex district). Utrecht (Het Spectrum) 2003, p. 225.

35. De Vries and Van der Woude, *Nederland 1500-1815*, (see note 26), p. 86.

36. Henry Pirenne, *Histoire de Belgique* III (History of Belgium III), 1907, p. 259. Cited in Braudel, *Beschaving, economie en kapitalisme (15de-18de eeuw)* (Civilization, economy and capitalism: 15th-18th century), Part III, (see note 16), p. 37.

37. W. Christaller, *Die Zentrale Orte in Süddeutschland* (The central town in Southern Germany). Jena 1933. The system of central places in the Netherlands has become particularly well known as a normative planning tool for the distribution of settlements and facilities. At the International Geographical Congress in Amsterdam (1938), Christaller presented the results of his research as a planning principle that would be pre-eminently usable for the development of newly reclaimed land. See: *Congrès International de Géographie*. Amsterdam 1938; Koos Bosma and Cor Wagenaar (ed.), *Een geruisloze doorbraak. De geschiedenis van architectuur en stedebouw tijdens de bezetting en de wederopbouw van Nederland* (A silent breakthrough. The history of architecture and urban development during the occupation and the reconstruction of the Netherlands). Rotterdam (NAi) 1995, pp. 165-166. For the application of the system of central places for the development of the IJsselmeer polders, see: Zef Hemel, *Het landschap van de IJsselmeerpolders, inrichting en vormgeving* (The landscape of the IJsselmeer polders, development and design). Rotterdam (NAi) 1994, pp. 164-165. Christaller's calculation methods have also found use by the programming of urban expansions. Hans van der Cammen and Len de Klerk, *Ruimtelijke ordening, van grachtengordel tot Vinex-wijk* (Spatial planning, from a ring of canals to Vinex district), (see note 31), pp. 135-136.

38. P.M. Hohenberg and L.H. Lees, *The making of urban Europe 1000-1950*, (see note 26), pp. 47-73.

39. As an illustration: a system here is an articulated and well-ordered whole. The structure is the description of the interior construction of the system; the well-ordered, frequently constant, and/or durable principle. Despite changes that occur the structure ensures that a system remains in place. A network is the most uncomplicated indication of a collection of interconnected matters. Even so, networks of towns also have a structure: 'hierarchies of centres', 'nodes and junctions', 'gateways and outposts', 'cores and peripheries'. P.M. Hohenberg and L.H. Lees, *The making of urban Europe 1000-1950*, (see note 26), p. 5. See also Braudel, *Beschaving, economie en kapitalisme (15de-18de eeuw)* (Civilization, economy and capitalism: 15th-18th century), Part III, (see: note 16), pp. 37-39.

40. P.C.M. Hoppenbrouwers, 'Van waterland tot stedenland' (From marsh land to a citified country), in: Thimo de Nijs en Eelco Beukers, *Deel I. Geschiedenis van Holland tot 1572* (Part I History of Holland till 1672). Hilversum (Verloren) 2002, p. 120. The analysis of De Vries and Van der Woude is of similar import: 'The fact that the urbanization in this area translated itself more into a large number rather than into sizeable towns speaks volumes about the importance of the push-factor of the agricultural crisis in relation to the pull-factor, that would have occurred from a powerful flourishing urban economy.' De Vries and Van der Woude, *Nederland 1500-1815* (see note 26), p. 35. In this regard it is interesting to read the second book of Jane Jacobs, *The economy of cities*. New York 1969.

41. Rob van Engelsdorp Gastelaars, 'Verstedelijking in Nederland tussen 1800 en 1940' (Urbanization in the Netherlands between 1800 and 1940), in: Ed Taverne and Irmin Visser (ed.), *Stedebouw. De geschiedenis van de stad in de Nederlanden van 1500 tot heden* (Urban development. The history of the town in the Netherlands from 1500 to the present). Nijmegen (SUN) 1993, pp. 30-38 and pp. 174-179. Engelsdorp Gastelaars distinguishes four sub-systems in the urbanization of the Netherlands between 1800 and 1940: '(a) the network of towns that was involved in international trade of the 17th and 18th centuries via the staple market, (b) the network of towns and villages that became involved with industrial production during the 19th century, (c) the system of central places that was involved with the welfare of the population of this country, and (d) the system of central places that was involved between 1800 and 1940 with the administrative organisation of the Kingdom of The Netherlands, which was becoming increasingly stronger' (p.175). From his subsequent exposé it seemed that these subsystems overlapped each other in many towns.

42. De Vries and Van der Woude, *Nederland*

1500-1815, (see note 26), p. 87. For developments in the European context see note 26 Braudel, *De tijd van de wereld* (The time of the world); De Vries, *European urbanization 1500-1800*, (see note 26); Clé Lesger, 'Stedelijke groei en stedensystemen' (Urban growth and systems of towns) and 'De dynamiek van het Europese stedensysteem' (The dynamics of the European system of towns), in: Ed Taverne and Irmin Visser (ed.), *Stedebouw. De geschiedenis van de stad in de Nederlanden van 1500 tot heden* (Urban development. The history of the town in the Netherlands from 1500 to the present). Nijmegen (SUN) 1993, pp. 30-38 and pp. 104-111.

43. Wagenaar and Engelsdorp Gastelaars, 'Het ontstaan van de Randstad, 1815-1930' (The origin of the Randstad, 1850-1930), (see note 26), p. 16.

44. Willem Heesen and Wilfried van Winden, 'Het strategisch landschap' (The strategic landscape), in: Hans Brand and Jan Brand (ed.), *De Hollandse Waterlinie* (The Holland Water Line). Utrecht/Antwerp (Veen) 1986.

45. Reh, Frieling and Weeber, *Delta Darlings*. Delft 2003.

46. De Pater, 'Van land met steden tot stedenland' (From a country with cities to a citified country), (see note 26), pp. 51-53.51-53.

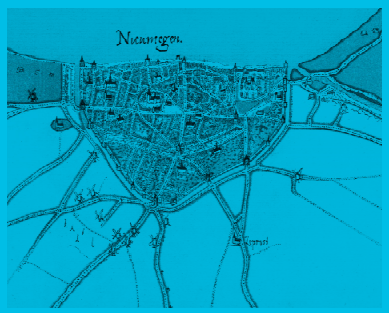
47. As regards the calculation of the housing occupation, a number of major errors have crept into Van Velzen and Hereijers' study, *De naoorlogse stad* (The post-war city), (see note 2) p. 47. These errors can be traced back to an incorrect assessment of the housing stock for the years of 1940 and 1970 in the diagram of the 'Total housing stock in the Netherlands',

48. In Amsterdam the average housing occupation was 3.74 persons in 1930 and in the AUP a further decrease to 3.34 had already been taken into account. *Algemeen uitbreidingsplan van Amsterdam, nota van toelichting* (General expansion plan of Amsterdam, explanatory notes). Amsterdam 1934, pp. 78-79. See also appendix IV.

49. Van der Cammen and De Klerk, *Ruimtelijke ordening* (Spatial planning), (see note 34).

A landscape of towns: on the genesis of Dutch towns and their street plans in the eleventh to fifteenth centuries

Reinout Rutte



In the period between the eleventh and the fifteenth centuries, several thousand towns of all kinds and sizes were established in Europe.[1] In the Netherlands, too, many new towns and cities appeared. The majority of the cities we know today date from that era. As elsewhere in Europe, the diversity in the Netherlands was considerable. Unfortunately, it is quite difficult to obtain a clear picture of town formation in the Netherlands between roughly 1100 and 1400, let alone one of town planning in that period.

There has been quite a lot of research on the history of towns in the Netherlands in recent decades, but it has seldom been comparative or synthetic.[2] In particular, much work has been done in the disciplines of medieval history, economic history and archeology. For example, town charters (*stadsrechten* in Dutch), city centre research (by archeologists) and economic and social developments from the late Middle Ages onwards have all received ample attention,[3] while a considerable number of monographs on specific towns have been published.[4]

There is, however, a lack of synoptic publications. The research is also very unevenly spread: the towns of Holland – i.e. the western part of the Netherlands – have received extensive treatment, but those of other provinces such as Gelderland much less. Most large cities have been studied but many small towns have been virtually ignored. It is also noticeable that many published studies concentrate on the period after the locality was already established as a town, rather than when it was being formed.[5] Little attention of any kind has been devoted to the planning of towns – the form and creation of town plans.[6]

In this article I will therefore attempt to give a picture of town formation in the Netherlands. After providing a brief theoretical and methodological framework, I will concentrate on two aspects. First, I will define a number of categories of Dutch towns on the basis of how they were formed; I will refer to these categories as 'urban landscapes'. Second, I will attempt to explore the differences and similarities in the street plans that correspond to these groups of towns. The patterns of distribution of the towns in the landscape, and their street plans, are thus the basis for this article. The chief question is this: what do these patterns and street plans look like, and why did they develop that way?

Theory and method

In every locality that turned into a town, the inhabitants, rulers and economic and geographical circumstances all played a part. The importance of each of these factors varied from town to town. The shifts and changes that occurred in the relationship between these social, political, economic and geographical factors in the course of time provide a basis for identifying different phases in the town formation process and for recognising groupings of towns that can be designated as urban landscapes.

A model (Fig. 002) may prove helpful in putting the factors that played a part in town formation into a context. There were three essential preconditions for the formation of towns in the Middle Ages: economic potential, the presence of a group of enterprising individuals bent on autonomy, and rulers' aspirations to organise society in certain places differently.[7]

The tripolar nature of this model may be explained as follows. Economic potential was in part assured by general economic expansion during the twelfth to fourteenth centuries. However, it was also dependent on the *genius loci*, which might consist of the availability of mineral reserves, busy traffic at the intersection of a historic road and a waterway, a flourishing marketplace or an easily defensible site. The presence of an enterprising group of individuals can usually be related to rapid growth in population, and in particular to the struggle for emancipation from feudalism that was manifesting itself throughout Europe. Efforts by rulers to change the way a certain locality or area was organised may be seen as a reflection of the aspirations of emperors, kings, bishops, dukes, counts and other lords to shape space in a more deliberate way.

These three preconditions could be satisfied in countless different ways and to varying degrees. An essential premise of this approach is that any deficiency in the operation of one of the poles can be largely counterbalanced by increased operation of one or both of the other two. For instance, it was possible in certain circumstances for a single pole to predominate. The shifts and changes that occurred in the relationship between the three poles can serve as a basis for identifying different phases in the town formation process and for formulating different urban landscapes.

Towns, cities and urban landscapes

Before presenting my overview, I must explain something more about the terms 'town', 'city' and 'urban landscape'. It is very difficult – perhaps even impossible – to define what a city or a town is.[8] In Dutch there is only the word *stad*. In English a city is normally bigger than a town. But how much bigger? And what is 'bigger'? Everyone knows more or less what is meant by a city or town, but when we start thinking about an exact definition we inevitably run into difficulties. The word most commonly used in research about urbanisation before the nineteenth century is 'town'.

Many different criteria could be suggested for deciding whether a given settlement really is a town – for example legal criteria (the existence of a town charter), morphological ones (town walls), economic ones (a market) or social ones (merchants). However, this list immediately raises problems. By no means all the settlements we regard as towns are known to have had charters; not all of them had town walls; and some settlements we regard as villages had markets and were frequented by merchants who in some cases even lived there.

Besides, the criteria I have mentioned chiefly relate to the Middle Ages. If we apply them to the centuries that followed, we immediately run into difficulties. The twentieth century is altogether problematic. The distinction between town and country has become increasingly blurred over recent centuries. What are we to make of localities that are described as 'urbanised rural communities' (*verstedelijkte plattelandsgemeentes* in Dutch)? In short, even the most flexible definition of a town or city cannot serve as anything more than a skeleton when it comes to describing cities in all their diversity and aspects.

We can safely state, however, that towns of all shapes and sizes do in fact exist and that they date from different periods. By examining these periods we can shed some more light on the matter. The overview I am about to present concerns localities that became towns in the high and late Middle Ages, and the criteria for according them town status will be crucial to the distinctions I make between the various categories of towns. My account will show that the status of a locality as a town or otherwise depends on a varying combination of factors and features.

The concept of 'urban landscapes' is just as difficult to define as that of towns, if not more so. The Dutch term for 'urban landscape' is *stedenlandschap*. This is borrowed from the German *Städtelandschaft*, which has been used in recent German historical research on towns in the late Middle Ages, especially the development of coherent groups of towns.[9] What I mean by an urban landscape is a group of towns that share a coherent genesis within a similar political,

social and economic context. This refers to patterns of town distribution that arose in a specific, and in many cases limited, time and space. Thus it is possible to distinguish between a number of urban landscapes in the Netherlands on the basis of their formation process, roughly between 1100 and 1400.

In the course of the centuries, a given urban landscape could be overlapped or extended by a newly developing landscape, but for the sake of clarity the different urban landscapes will where possible be treated as distinct. The discussion will be confined to the present-day borders of the Netherlands. The situation was different in the period of town formation, but for the purposes of studying town formation the present frontiers will serve as a reasonable working basis. Only in the southern part of the country and at a few points in the east does this create difficulties. Where necessary, towns across the border will also be referred to in such cases.

Nine urban landscapes and their street plans[10]

1. First, there is the urban landscape of the oldest urban settlements, which for the most part gradually developed into towns in the eleventh and twelfth centuries. These are scattered throughout the country. They were administrative and commercial centres, which lay on important international trade routes. Groningen, Oldenzaal, Deventer and Utrecht functioned as the seats of government and power of the Bishops of Utrecht, then the main rulers of the lands north of the major rivers. Stavoren, Medemblik, Tiel, Zaltbommel and Nijmegen were primarily trading centres. The first four of these were already hubs in an international trade network by the ninth or tenth century, but had passed their prime by the twelfth century.[11]

Maastricht was an important ecclesiastical centre. Utrecht, Nijmegen and Maastricht had Roman origins, but it was not until the eleventh and twelfth centuries that they achieved significant town status, in several respects: special rights for merchants and craftsmen were gradually formulated by the inhabitants, and the towns emerged as fully-fledged commercial and administrative centres, with permanent markets and their own systems of justice. These advances were reflected by the construction of concentrated housing and monumental architecture, especially churches. In later centuries several of these towns would grow to become some of the largest cities in the Netherlands.

These oldest urban settlements were all situated on major rivers or, in the case of Groningen, on an important outlet to the sea.[12] If we examine the towns in this group which later grew to become some of the largest in the country, we will observe that they all had more than one ancient centre. In Deventer, for example, there was a riverside settlement around St. Lebuin's church and another around the Bergkerk ('Church on the Hill'), on the eastern edge of the town (Fig. 003a).

In Nijmegen there were the Valkhof (a castle in the east of the town) and a settlement on the River Waal (Fig. 003b). Nijmegen, Utrecht and Maastricht all had early predecessors, for example in the form of one or more Roman settlements. Deventer's settlement on the River IJssel dated from the Carolingian era. In these towns, the separate centres expanded to form a single urban fabric, and by the high Middle Ages the entire area was filled with streets. Not infrequently the original centres declined in significance and new centres developed in between them. By the late Middle Ages, rationally planned town extensions were being built around these polycentric settlements; in Nijmegen this is apparent on the south-west side of the town. Sometimes the existing street plan was also remodelled, as is evident from the regular pattern of parallel streets in large parts of Deventer.

2. From the latter half of the twelfth century onwards, the first group of towns was succeeded by a second one. This new group consisted of Zutphen, Arnhem, Dordrecht, Muiden, Kampen and Zwolle. This urban landscape resembles the first, in that the formation of these towns is again related to international trade flows. Dordrecht, Muiden, Kampen and Zwolle arose at or near the mouths of big rivers; Dordrecht on the Maas, Muiden on the Vecht and the other two on the IJssel. Zutphen and Arnhem lay at strategic points upstream, on the IJssel and the Rhine respectively. The transformation of these settlements into towns was, moreover, related to the aspirations of the main rulers north of the major rivers, who by then included not only the Bishops of Utrecht but also the Counts of Holland (who had a hand in the development of Dordrecht) and the Counts of Gelre (who concerned themselves with Zutphen and Arnhem).

These places achieved town status in the decades around 1200, in a similar way to the towns in the first urban landscape but rather more quickly. A difference from the towns in the first landscape is that those in the second one did not have such a long history. Arnhem, Zutphen and Zwolle all had ancient centres (dating from before 1000), but these were not nearly as old as the Roman antecedents of, say, Nijmegen or Maastricht.[13] Kampen and Dordrecht had no previous history at all. The two towns entered the picture around 1200 and quickly established themselves as trading centres. Most towns in this urban landscape later became some of the largest cities in the Netherlands.

Like the towns in the previous group, the towns in the second group were situated on rivers.[14] In Arnhem, Zutphen and Zwolle, the original centre, with a church, was located on the Rhine, the IJssel and the Aa respectively. The towns developed around these ancient cores in the latter half of the twelfth century. Unlike in the first group, there was only one ancient centre. By the end of the thirteenth century, extensions were becoming increasingly regular in layout. This is apparent, for example, in the Nieuwstad ('new town') on the north side of Zutphen (Fig. 004a).

Kampen, Muiden and Dordrecht are notable for the elongated shape of their settlement along the waterways (Fig. 004b). The churches in both Kampen and Dordrecht are at one end of the settlement, which in the course of the thirteenth century expanded along almost the entire length of the waterfront, as can be seen on the maps by Jacob van Deventer. There was then further expansion to the landward side (to the extent that this was possible in the case of the island town of Dordrecht, the south-east). Muiden's growth petered out at an early stage.

3. Thirdly, there are the ports of Flemish Zeeland: Aardenburg, Oostburg, Hulst, Axel, Middelburg and Zierikzee. These flourished in the twelfth and thirteenth centuries in the wake of Flemish cities such as Bruges, Ghent and Ypres. The flourishing economy, rising population and increase in commercial activity that accompanied urbanisation in Flanders made the development of these towns possible. The harbours all either communicated directly with the North Sea or were located on an island or a sea inlet. Their growth into towns was thus primarily due to favourable economic circumstances.

The special rights that the citizens of these towns had formulated in the course of time were confirmed at their request in a written charter drawn up by a ruler (either the Count of Holland or the Count of Flanders).[15] Other factors, including morphological ones, contributed to the development of these settlements into towns, as in the first urban landscape. However, most of these towns later lost their standing; Middelburg was the only one to continue expanding after the Middle Ages. Indeed, those located in what is now Zeeland Flanders went into complete decline as siltation and land reclamation cut them off from the coast.

The ports of Zeeland were typically situated on a sea inlet.[16] The harbours not infrequently penetrated deep into the town. This is well illustrated on the map of Zierikzee by Jacob van Deventer (Fig. 005a). In most ports in Flemish Zeeland the harbour has since silted up, for example in Hulst where it originally penetrated the north-west side of the town (Fig. 005b). By the time Van Deventer drew his map (around 1560), the town no longer had any real link to the sea. Majestic churches were usually erected in the centres of these towns in the course of the twelfth century, replacing more modest predecessors. Often they adjoined a public square or a broad street. From the centre, the main streets radiated in various directions, following the pattern of earlier roads and lanes. A remarkably large amount of undeveloped land was enclosed within the town walls.

4. A fourth group of towns was established in the period from just before 1200 to about 1270 as a result of rulers' town planning and policies. These towns are located in Brabant, Gelderland and what were then their borderlands: Bergen op Zoom, Breda, Geertruidenberg, Heusden, 's-Hertogenbosch, Eindhoven, Helmond, Roermond, Wageningen, Doesburg, Doetinchem, Lochem, Harderwijk and Elburg. To these may be added Geldenaken, Landen and Nieuw-Genepiën, all in Belgian Brabant, and Geldern and Goch in Germany. Rulers played a crucial part in the formation of these towns, which took place over a short period. The main rulers involved were the Dukes of Brabant and the Counts of Gelre (now known as Gelderland), who had reached the pinnacle of their power in the first half of the thirteenth century. The western part of Brabant was dominated by a number of lesser rulers such as those of Heusden and Breda. The Bishops of Utrecht may also be mentioned in this context, although they succeeded in their intentions only in Amersfoort, whereas Ommen, Rijssen, Goor and Vreeland never really flourished.[17]

The major rulers successfully used the creation of towns as an instrument of power politics to expand and consolidate their domains. The town charters included exceptionally favourable citizens' rights, which were intended to attract additional inhabitants. The morphological layouts of the towns were also created on the initiative of their rulers. Economic potential was a contributory rather than a decisive factor in the formation of these towns. Some of them remained small, while others (especially 's-Hertogenbosch) proved to have the potential to grow into cities of considerable size and influence in the centuries that followed.

The towns that arose as a result of major rulers' urbanisation policies and town planning were often situated on waterways that were potential trade routes – for example, Doetinchem on the Oude IJssel or Heusden on the Maas (Figs. 006a and 006b).[18] A new church would be built, or an existing nearby church would be moved or split up to form a new one. In some cases, such as 's-Hertogenbosch and Harderwijk, the church would not be built in the town until later. The church in the centre of Doetinchem was erected at the beginning of the thirteenth century when the town was built, on the instigation of Counts Gerard IV and Otto II of Gelre. Its predecessor was sited farther west. The street plan was formed by restructuring the earlier pattern of roads *in situ* and then adding on new streets in a regular pattern.

Heusden was also built at the beginning of the thirteenth century, on the initiative of the rulers of Heusden, along a new stretch of

the Maas created by natural shifts in the river's course. The old course is still visible to the south of the town, with the earlier village of Oud Heusden just beyond it. The church erected when the town was built was split off from the church of Oud Heusden. The moats and walls of these towns – not only of Heusden and Doetinchem but also of most of the others – date from the time of their construction. They generally had a regular pattern of streets. These layouts were usually the result of either new construction or the restructuring of an earlier road pattern. Landen and Roermond, as well as Heusden, are examples of the former, and Geertruidenberg and Lochem of the latter.

5. The fifth urban landscape also emerged during the period that last from just before 1200 until the late thirteenth century, but was largely a consequence of the thriving economy of the northern Netherlands in this period. This urban landscape consisted of older settlements that gradually developed into towns. This happened primarily on the initiative of the inhabitants who, in times of prosperity, requested their ruler, the Count of Holland, to confirm their rights in a written charter, as in Flemish Zeeland. These towns, located in Holland not far inland from the coastal dunes, were Alkmaar, Haarlem, Leiden, The Hague and Delft. The settlements developed from local hubs into regional markets and centres of industry.[19] All of them expanded and eventually became some of the largest cities in the Netherlands.

These towns lay on important inland waterways: Alkmaar on the Voormeer, Haarlem on the Spaarne, Leiden on the Rhine and Delft on the Delf (Figs. 007a and 007b).[20] They were all connected to Holland's network of inland waterways. The old village centres with their churches are clearly recognisable: on the west side of Alkmaar, around the central market square in Haarlem, in the area around the citadel in Leiden and in the vicinity of the Oude Kerk in Delft.

The pattern of earlier roads and land reclamation structures is also easily recognisable in the street plans, e.g. the roads that run north-south along what were once coastal sand ridges in Alkmaar and Haarlem, or the old field boundaries and ditches produced by peat extraction which are to be seen in Leiden and Delft. Another striking feature is the system of urban canals. The construction of these canals was necessary not only for defensive purposes but above all for drainage. In the late Middle Ages, the towns expanded on the basis of rational planning which resulted in a regular street pattern, for example on the west side of Haarlem. From its ancient centre on a sandy elevation, Alkmaar expanded farther and farther eastwards into the adjacent peat lands and the Voormeer.

6. The sixth urban landscape is again different, being closer to the fourth in character. It is the constellation of late medieval new towns. Between roughly 1270 and 1400 a series of new towns appeared, all within a short period. Rulers – not only the numerous lesser rulers but also the Bishops of Utrecht and the Counts of Holland and of Gelre – built towns that were new in a social as well as a spatial sense, to serve as centres of political and economic power in their own domains or in disputed border country.

The main concentration of these towns lay in the delta of the major rivers, much of which formed the border region between the principalities of Holland, Brabant and Gelre and the bishopric of Utrecht. From about 1300 the power of the major rulers was waning, and many lesser rulers took advantage of this to build towns in their domains in order to reinforce and emphasise their standing. Examples to the south of Utrecht include Nieuwpoort ('new town'), Ameide, Montfoort, IJsselstein, Vianen, Culemborg, Wijk-bij-Duurstede, Buren, Woudrichem, Heukelum, Leerdam and Asperen. In the vicinity of Nijmegen we find Megen, Batenburg, Ravenstein, Grave and Gennep, and in the southern part of Central Limburg Nieuwstadt ('new town' again) and Montfort. A few more of these towns are located in the eastern part of the Netherlands, namely Bredevoort and Delden. Finally, the province of Overijssel contains a number of areas which were fought over by the Bishops of Utrecht, other rulers and the farmers of Drenthe and Friesland. The towns concerned were Hardenberg, Steenwijk and Vollenhove.[21]

All these towns remained small in the centuries that followed. This is due to the artificial way they were created, primarily because certain rulers felt the need to do so. They were inclined to overlook matters such as the town's economic potential or the need to attract enough new inhabitants.

The new towns of the late medieval period (fourteenth century) arose in the vicinity of waterways and roads of varying importance.[22] A considerable number of them lack an ancient centre, but in most cases there was originally a castle beside which the new town developed. The street plans of nearly all these towns were designed in one go when the town was established, and were subsequently not extended any further. They are all regular in structure and the street pattern is often fairly rectilinear, although earlier roads or land reclamation structures are not infrequently recognisable in the street plans. For example, Buren (which was built by the local ruler Alard van Buren in approximately 1400) has an orthogonal street plan whose outline to some extent follows the course of the Korne (a local stream) and ditches from the ancient field structure that served as a basis for the moat (Fig. 008a).

Vianen, built on the initiative of Zweder van Vianen and Willem van Duivenvoorde – two local rulers – in the first half of the fourteenth century, had a rectilinear street plan to the west of the main central axis, while the curving line of an earlier lane is evident to the east (Fig. 008b). The churches in these new towns were generally split off from an older village church in the vicinity. Sometimes an old village church would be moved to the new town, as for example in IJsselstein. Not only the church but also the fortifications date from the period of town formation. A small proportion of the new towns arose alongside an existing settlement which in some cases already had a church. In Montfoort, Heukelum, Leerdam, Asperen and Batenburg, a new, regular ground plan was developed as an extension of an older dyke-top village.

7. Besides the late medieval new towns, another urban landscape developed in the period between approximately 1270 and 1400 in the west of the country. This was the constellation of existing settlements that turned into towns under the influence of citizens, rulers and economic innovations which were probably universal, in varying combinations. These were the ports on the islands of Zeeland, which had outlets to the North Sea, and ports at the mouths of the major rivers: Tholen, Sint Maartensdijk, Reimerswaal (now vanished), Goes, Veere, Vlissingen, Brouwershaven, Goedereede, Brielle, Schiedam and Rotterdam.

It can be no coincidence that these new ports emerged at precisely the time when most of the older ports in the urban landscape of Flemish Zeeland were vanishing. Indeed, it seems that there was room for more towns within the configuration that existed at the end of the thirteenth century. The urban economy that was coming to prevail in the west of the northern Netherlands allowed the construction of more and more towns, and may well have required more and more harbours (for example to accommodate the larger ships then coming into use, such as the *kogge* or cog). Towns began specialising in particular sectors of trade and industry. Moreover, Holland's rural areas were increasingly delivering their produce to urban markets. Even so, it is surprising to learn that in the course of the fourteenth century – a period usually associated with a stagnating economy, epidemics of plague and declining population (although this was less true of Holland, whose ascendancy began around this time) – more towns flourished than ever before.[23] This urban landscape also includes towns in Holland that arose along inland waterways or on the shores of the Zuider Zee: Gouda, Woerden, Weesp, Beverwijk, Amsterdam, Monnickendam, Edam, Hoorn, Enkhuizen and Medemblik, the last of which thus underwent something of a revival.

In some of these towns, such as Veere, Brouwershaven, Schiedam, Gouda and Beverwijk, a lord or lady initially played a significant part in the formation of the town. The importance of economic potential must always be borne in mind, but is unfortunately hard to assess. The same is true of merchants, administrators and craftsmen who could be influential stakeholders in town formation. Several of these towns were in later centuries to become some of the largest and most important in the Netherlands, although in some cases (such as Enkhuizen, Hoorn and other towns on the Zuider Zee) this was only temporary. Others, particularly those on the islands in the south-west, remained relatively small.

The towns in this important seventh group were all located on major navigable waterways. Many of those in Holland lay at the mouth of a river or at the junction of a smaller river with a major one. In several cases a dam had been built at this point.[24] In the great majority of cases the harbour lay within the town. In Holland, the harbour was directly connected to or formed part of a system of urban canals. Edam's harbour, for example, runs lengthways through the town, forming the main artery in the surrounding system of canals (Fig. 009a). The towns on the islands lacked urban canals; all they had were moats around their fortifications, and most of them a harbour that penetrated the town.

The pattern of old waterways, roads and land reclamation structures remains clearly recognisable in the street plan, especially in Holland. A regular street plan was generally built on the basis of those older routes and structures. The same was true of any later town extensions. In the Zuider Zee towns the parish church was not always in the centre, for in most cases it was the church of an older village next to which the harbour town had arisen. In Edam, the church is located at the northern end of the town. On the other hand, in most ports on Holland's inland waterways the church was more or less in the centre. In the 'dam towns' (*damsteden*) which developed from small settlements by river dams, the church generally dated from the start of town formation. Most other towns developed around older settlements (including a church) that were strategically situated on major waterways, examples being Woerden and Weesp.

Several of the harbour towns built on the islands also arose out of existing settlements with a church which were favourably situated for the construction of a harbour, such as Brielle, Reimerswaal and Goes. Others were based on a new harbour constructed some distance from an older church village but still within the parish of that church. Examples are Veere on the edge of the parish of Zanddijk, Brouwershaven in the parish of Brijdorp, Tholen in Schakerlo and Nieuw-Vlissingen in Vlissingen. The map by Jacob van Deventer still shows the village of Oud-Vlissingen (Old Vlissingen) to the west of the newer town (Fig. 009b). In all four cases, the once central

but harbourless settlement with its old parish church was gradually obliterated over the centuries by the newer harbour town.

At least four groups can thus be identified within this urban landscape: on the islands (1) towns that developed from an existing village centre with a church, and (2) new harbour towns constructed some distance from older settlements; (3a) towns in Holland located at a dam on a river, and (3b) similar towns on the shores of the Zuider Zee; and (4) other towns located on Holland's inland waterways which developed from or alongside older settlements.

8. The eighth group is in several respects similar to the previous urban landscape. In the east of the Netherlands there are 's-Heerenberg, Groenlo, Enschede, Ootmarsum, Almelo, Coevorden, Hasselt and Genemuiden. These too were existing settlements that turned into towns in the late Middle Ages through a varying combination of influences (citizens, rulers and economic changes). However, unlike those in the west, most of them were not located on navigable waterways. Apart from the last three, they were all located in the Achterhoek and Twente districts. Only Hasselt and Genemuiden, in the delta of the river Vecht, were ports. Some other towns, located in what is now Limburg, may also be considered part of this group: Venlo on the River Maas, Sittard and Valkenburg.[25] All the towns in this group that did not lie on navigable waterways remained small and insignificant for centuries. A mere handful, such as Venlo and Hasselt (both of which lay on major waterways), rapidly gained in importance.

The towns in this eighth group were mostly situated along secondary trade routes.[26] The street plan was generally irregular in structure, having developed from an older village plan, around which a moat was dug at the time of town formation. We can see this in the street plan of Enschede, for example, and even more so in that of Groenlo (Figs. 10a and 10b). The countryside surrounding the village buildings, including its lanes, was encompassed within the new moat, and as a result the village church often no longer occupied a central position. In Enschede a complete double circle of canals was dug around the village. However, the street plan remains clearly recognisable within it, however, and the church came to lie in the north of the town. In Groenlo the church is also on the north side, close to the ramparts. Incidentally, the fortifications as indicated on Jacob van Deventer's map of Groenlo do not date from the time when the town was formed (the fourteenth century) but from somewhat later.

9. Finally there is a ninth, remarkable urban landscape: the Frisian towns of Dokkum, Leeuwarden, Franeker, Harlingen, Bolsward, Workum, Hindeloopen, IJlst and Sneek. Their rise was to some extent synchronous with that of the towns on the Zuider Zee mentioned earlier (the harbour towns in the west, such as Enkhuizen, Hoorn and Edam). But well before this crop of towns sprang up in the late Middle Ages, Friesland had had a history of trading settlements whose development perhaps corresponded more closely to that of the first urban landscape. Many Frisian towns probably developed in the fourteenth century on the sites of these old trading settlements.[27] The formation of Frisian towns remains largely obscure. An important difference from the other urban landscapes is that in Friesland rulers seem to have played no part in the development of towns. But what about the influence of citizens and the economic situation? How were so many towns, all lying by the sea or on inland waterways in western Friesland, able to flourish in such proximity?

The siting of Frisian towns was closely bound up with the system of waterways in the immediate and wider surroundings.[28] This system also had an influence within the towns, as is evident in the urban canals in such places as Bolsward and Harlingen (Figs. 11a and 11b). The street plans of Frisian towns were not infrequently elongated and aligned with waterways and land reclamation structures. The pattern of streets in between the waterways is generally regular in form. The church is normally located away from the centre, and is in many cases an old village church. This is also true of Harlingen, where the parish church was actually located outside the moat on the south-east side of the town at the time when Van Deventer drew his map around 1560.

Conclusion

The formation of towns in the eleventh to fifteenth centuries remains a surprising phenomenon. How were so many towns able to spring up in the space of a few hundred years? Moreover, it happened not only in the Netherlands but throughout Western Europe.[29]

In the Netherlands I have identified nine different groups of towns – nine urban landscapes – and their typical street plans on the basis of the way they formed. This broad picture undoubtedly has room for adjustment and refinement. Alert readers will no doubt have noticed that a number of towns have not been mentioned. This is quite deliberate. The towns I omitted were borderline cases that resisted classification.[30]

I intend to devote a future article to developments in urban landscapes and town plans in Holland from the fourteenth to nineteenth centuries.[31]

Notes

The complete titles of the literature mentioned in the notes, you can find at the end of the Dutch version of this article on page 84.

***** An amended version of this article appeared in R. Rutte and H. van Engen (eds.), *Stadswording in de Nederlanden. Op zoek naar overzicht*. Hilversum 2005.

1. See for example Stoob, 'Stadtformen'.

2. However, see Sarfatij, 'Mittelalterlichen Seehandelszentren'; Van Uytven 'Stadsgeschiedenis'; Verkerk, 'Städte des Rhein-Maas-Deltas'; Visser, 'Städtischen Entwicklung'; and Chapter 6 of Lambert, *The Making of the Dutch Landscape*. The archeologist Sarfatij is particularly noteworthy because he has made several attempts to produce a classification. This is apparent from the abovementioned publication and others by him (some of which are mentioned in later notes). Other volumes include the fascinating Steegh *Monumenten Atlas* and the older, now outdated study by Fockema Andreae, *Duizend jaar bouwen*. However, it is difficult to gain a clear impression from these studies. Burke, *The Making of Dutch Towns* and Gutkind, *Urban Development: The Netherlands* are similarly outdated. The booklets by Alberts (*Middeleeuwse stad* and *Nederlandse Hanzesteden*) share the same problem and give a general description of 'the medieval town' rather than an impression of the formation of towns in the Netherlands.

3. See for example Cappon and Van Engen, 'Stad door stadsrecht?'; Cordfunke, Hugenholtz and Sierksma, *Hollandse stad*; Van Es, Poldermans and Sarfatij, *Bodemarchief bedreigd* and Van Es, 'Archeologische monumentenzorg'; Kruisheer, *Stadsrechtoorkonden*; Sarfatij, *Verborgen steden*; Verkerk, 'Stadsrechtprivilege'. Cf. Van Engen, 'Geen schraal terrein'.

4. See for example Van Herwaarden, De Boer and Van Kan, *Dordrecht*; Abels, *Gouda* and Denslagen, *Gouda*; Dekker, *Goes*; Frijhoff et al., *Zutphen*; Ree-Scholtens, *Haarlem*. There are *Historische Stedenatlassen van Nederland* concerning Amersfoort (Speet), Bergen op Zoom (Van Ham), Haarlem (Speet), Kampen (Speet), Schoonhoven and Nieuwpoort (Visser, Elsing, Henderikx and Wegner), Venlo (Hermans) and Zutphen (Doornink-Hoogenraad).

5. See Kooij, 'Het *format* van de stad' and Rutte and Hoekveld, 'Stadswording en machtspolitiek'.

6. See Boerefijn, 'De totstandkoming van de stedelijke vorm', and Rutte, 'Stichten of groeien'.

7. For further information on this, see Rutte, *Stedenpolitiek en stadsplanning*, pp. 9-23. When identifying the determining factors in town formation during the Middle Ages I was assisted and inspired by the following reviews: Gerlich, *Geschichtliche Landeskunde*, pp. 468-488 and Pitz, *Europäisches Städtewesen*, especially pp. 11-14 and 391-396.

8. Regarding the definition of 'city' or 'town', the great urban historian Ennen concludes by the second page of her study (Ennen, *Europäische Stadt*, p. 16) that even the most elaborate definition of a city or town cannot be anything more than a skeleton. For readers who nonetheless wish to have something to go on, the following definition from Van Uytven, 'Stadsgeschiedenis', p. 188, is often cited: 'the town is a settlement with centralised functions, to which it owes its diversified socioeconomic structure, its relatively dense population and concentration of building, its appearance that contrasts with its surroundings and its distinct mentality'. On the concept of town and city, see also: Weber, 'Die Stadt'; Van Loon, *De ontstaansgeschiedenis*; Irsigler, 'Überlegungen'.

9. See Escher, Haverkamp and Hirschmann, 'Städtelandschaft'.

10. An important starting point for formulating this classification was Map 16, 'Development of the towns to 1795', from Thurkow et al. *Atlas van Nederland: Bewoningsgeschiedenis*. In this connection see Visser, 'Dichtheid van bevolking'. See also Renes, 'Stad in landschap'. It should also be noted that not all the literature consulted could be covered in these notes. No effort has been spared to cite or mention examples of the literature central to this study. Wherever possible I have chosen to cite, for each urban landscape, literature in which the development of groups of towns is treated systematically, as well as literature relating to a single town. As will be clear from the introduction to this article, by no means all towns in the Netherlands have been the subject of such studies. In any case, it is certainly not my intention to cover everything, so the bibliography is not exhaustive.

In the town plan analysis, grateful use has been made of the plans drawn by Jacob van Deventer, a number of which are reproduced here. Around 1560, the land surveyor Jacob van Deventer drew plans of most of the towns in the Netherlands. This work was commissioned by Philip II, King of Spain and other domains, presumably for military purposes. It is now known that most of Van Deventer's town plans are highly reliable. See Visser, 'Inleiding'.

11. Petri, 'Anfänge Städtewesens'; Sarfatij, 'Dutch Towns'; Sarfatij, 'Stadt am Fluss'; Verhulst, 'Entstehung der Städte'; Verhulst, *Rise of Cities*. Of the places that formed a central part of international trading systems in the ninth and tenth centuries, some had declined in significance or even vanished by the twelfth century. The best known instance is Dorestad; see the abovementioned literature for further information.

12. Boersma, 'Groningen'; Hoekstra, 'Utrecht'; Oude Nijhuis and Rorink, 'Oldenzaal'; Panhuysen and Leupen, 'Maastricht', cf. Theuws, 'Maastricht'; Sarfatij, 'Nijmegen'; Spitzers, 'Deventer'.

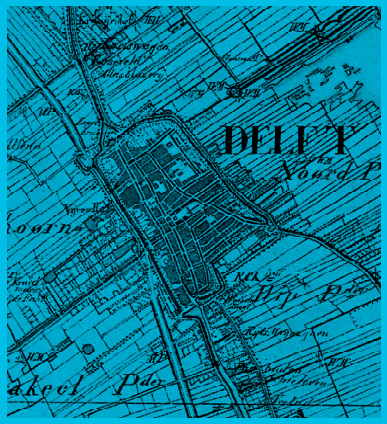
13. Petri, 'Südersee- und IJsselstädte'; Verkerk, 'Städte des Rhein-Maas-Deltas'.

14. Van Beek and Van Vilsteren, 'Zwolle'; Groothedde, 'Zutphen' and Van Schaik, 'Zutphen'; Sarfatij, 'Dordrecht'; Speet, *Kampen*,

pp. 7-21; Verkerk, 'Arnhem'.
15. Burgers, 'Vlaamse stadskeuren'; Gottschalk, *Westelijk Zeeuws-Vlaanderen*, pp. 39-55 and 130-138; Gottschalk, *Vier Ambachten*, pp. 96-99, 217-219, 236-239, 268-271, 344-348 and 551-553; Henderikx, 'Havenplaatsen in Zeeland'.
16. Henderikx, 'Zierikzee'; Henderikx, 'Middelburg'; Trimpe Burger, 'Aardenburg' and De Vries, 'Aardenburg'.
17. Rutte, *Stedenpolitiek en stadsplanning*, pp. 65-77 and 81-114. Cf. Van Uytven, 'Moyennes et petites villes Brabant' and Steurs, *Naissance d'une région*. In what is now Zeeland Flanders there was Biervliet, one of a group of towns that resulted from the town planning and policies of the Counts of Flanders in the latter half of the twelfth century. The group also included at least Grevelingen, Nieuwpoort and Damme. In Holland and Zeeland there were Westkapelle and 's-Gravenzande, the outcome of the rather unsuccessful town planning and policies of the Counts of Holland in the first half of the thirteenth century. For further information, see Rutte, *Stedenpolitiek en stadsplanning*, pp. 57-65 and 119-139.
18. Alberts, 'Doetinchem'; Arts, 'Eindhoven en Helmond'; Brongers, 'Amersfoort'; Van Ham, *Bergen op Zoom*, pp. 15-35; Van Hell, 'Harderwijk'; Hendriks, *Heusden*; Janssen, ''s-Hertogenbosch'; Leenders, *Van Turnhouter voorde*, pp. 252-254, 292-294, 343-346, 374-383; Linssen, 'Roermond'; Margry, 'Geertruidenberg'; Palmboom, 'Lochem'; Van Petersen and Harenberg, *Doesburg*, pp. 3-32; Renes, 'Wageningen'; Verlinde, 'Goor'.
19. Cordfunke, Hugenholtz and Sierksma, *Hollandse stad*; Hoppenbrouwers, 'Van waterland tot stedenland'; Henderikx, 'Graaf en stad'; Kruisheer, *Stadsrechtoorkonden*. In The Hague, which had a special position as the seat of the Counts of Holland, the urbanisation process started later than in the other four localities, but otherwise it belongs to this group.
20. Cordfunke, 'Alkmaar'; De Klerk, *Hofstad*, pp. 1-33; Raue, *Delft*; Speet, *Haarlem*, pp. 6-9; Van der Vlist, 'Leiden'.
21. Rutte, 'Stedebouw in de Middeleeuwen'; Rutte, 'Middeleeuwse nieuwe steden'; Rutte, 'Nieuwe steden Stichten'; Rutte, 'Falen of slagen'; Rutte, 'Stadswording rivierengebied'. Naarden and Elburg are not mentioned in the text because they were reconstructions of existing towns. For further information see Van Engen, Kos and Rutte, 'Eenen niewen stede' and Rutte with Visser and Boerefijn, 'Stadsaanleg'. Purmerend was the initiative of a rich merchant and banker who had the new town built to boost his own status and reputation. There were also several failed new towns or dubious cases, among them Haastrecht and Hagestein in the region of the major rivers, Kessel and Neeritter in Central Limburg, Bronkhorst, (Laag-)Keppel and Diepenheim in the eastern Netherlands, and, to the west, Bunschoten and Staverden in the Eem Valley and on the Veluwe. For information on these cases, see the abovementioned literature and Renes, *Landschappen Maas en Peel*, pp. 250, 264-268, 274-278 and 323-328, and Rutte, 'Kwartier van Zutphen'.
22. As stated in the introduction to this article, little in-depth research has been conducted into small towns in the Netherlands and thus into late medieval new towns. However, see Alberts, 'Batenburg'; Van der Eerden, Hauer and Van Omme, *Wijk bij Duurstede* and Van Es, Van Doesburg and Van Koningsbruggen, *Wijk bij Duurstede*; Fafianie, 'IJsselstein'; Kolks and Verlinde, 'Delden'; Kuys, 'Grave'; Maarschalkerweerd, 'Steden Utrecht'; Rutte, 'Buren'; Venner, *Nieuwstadt*, pp. 10-29; Vervloet, 'Bunschoten'; Visser, *Schoonhoven*, pp. 113-122; Visser, Elsing, Henderikx and Wegner, *Schoonhoven en Nieuwpoort*, pp. 23-32; Voltman, 'Bredevoort'.
23. Gottschalk, 'IJsselstädte und Amsterdam'; Henderikx, 'Havenplaatsen in Zeeland'; Hoppenbrouwers, 'Van waterland tot stedenland'; Petri, 'Südersee- und IJsselstädte'; Rutte with Kos, 'Amstel- en Vechtdelta'. Gorinchem and Schoonhoven are also numbered among the ports, even though their structure and siting also bear a resemblance to that of the late medieval new towns. Unlike the latter new towns, both Gorinchem and Schoonhoven expanded into harbour towns of more than local importance, and both were later extended. Perhaps Steenbergen and Zevenbergen in West Brabant may both be counted among the ports of the late Middle Ages. In West Friesland, a succession of villages were granted town charters in the period 1402 to 1416. These charters were not connected with urban development but reflected improvements in administration and jurisdiction (Dekker, 'Stadsrecht platteland').

The rise of ports in the west of the Netherlands from the end of the thirteenth century and during the fourteenth century accords with the picture Hoppenbrouwers paints of prosperity in Holland ('Hollands voorsprong') in his abovementioned article. In this connection see also Van Zanden, 'Op zoek'. However, the development of this huge number of new port towns has hitherto received surprisingly little attention. This is all the more striking in that the history of Holland has been treated so exhaustively.
24. Alders, Kruisheer and Schweitzer, *Beverwijk*; Baart, 'Amsterdam'; Borger, 'Hoorn'; Boschma-Aarnoudse, *Edam*, pp. 71-131; Cappon and Van Engen, 'Brouwershaven'; Dekker, *Goes*, pp. 85-189; Heidinga and Van Regteren Altena, *Medemblik and Monnickendam*; Henderikx, 'Veere'; Hoek, 'Schiedam'; Leupen, 'Weesp'; Plomp, *Woerden*, pp. 42-55; Van der Schoor, *Rotterdam*; Speet, 'Amsterdam'; Stamkot, *Gorinchem*, pp. 4-33; Visser, 'Gouda' and Goudriaan, 'Gouda'; Visser, *Schoonhoven*, pp. 14-76 and Visser, Elsing, Henderikx and Wegner, *Schoonhoven en Nieuwpoort*; De Vries, 'Enkhuizen'.
25. Stroink, *Stad en Land van Twente*, pp. 170-223; Venner 'Steden Limburg'; Van Voorden, *Steden Limburg*, pp. 37-69. Perhaps Weert may also be considered part of this group. Echt is a doubtful case. For more on this, see Renes, *Landschappen Maas en Peel*, pp. 234-236 and 267-268, 328.
26. Most small towns in the eastern Netherlands have, as indicated, received equally little attention. However, see Hermans, *Venlo*, pp. 23-28; Ten Hove, *Hasselt*, pp. 11-18; Thissen, 'Sittard'; Vemer, *Groenlo*, pp. 7-54.
27. Bos, *Archeologie van Friesland*, pp. 62-66 and 165-169; Karstkarel, *Friese elf steden*; De Langen, *Middeleeuws Friesland*.
28. Frisian towns have hitherto not received the attention they deserve. In archeological respects, however, some splendid work has been done. See for example De Langen, 'Leeuwarden' and Noomen, 'Leeuwarden', as well as Sarfatij, *Verborgen steden*, pp. 164-166 and cited literature. See also Kullberg, *Bolsward*.
29. For Europe see for example Stoob, 'Stadtformen'. In the Netherlands a few towns were established after the beginning of the fifteenth century, including Sloten and Klundert. Willemstad, often referred to as a fortified town, was a village called Ruigenhil until its fortifications were built. The great era of town formation was over by 1400. Many towns were extended during the sixteenth and seventeenth centuries, but it was not until the latter half of the nineteenth century and, above all, the twentieth century, that new towns were once again built.
30. Sluis, Rhenen and Appingedam are examples of difficult cases. There are also several borderline cases such as Nijkerk and Schagen. Can these localities be regarded as towns or not? The first person to submit a convincing answer and name at least two towns that have been omitted will receive a modest prize.
31. This article will appear in *Overholland* 3 under the title 'Expansion and contraction of Dutch towns. Urbanization, urban planning and de-urbanization in Holland (14th-19th century)'.

Delft railway zone
Leen van Duin and Willemijn Wilms Floet



According to Gerald L. Burke Delft can be seen as a classic example of a Dutch watertown: 'The basic pattern of the development was determined by three waterways: the original Oude Delft, the Nieuwe Delft which was cut parallel to and some seventy yards east from the Oude Delft, and a natural waterway which ran diagonally across the field drainage canals and then turned in a northerly direction parallel with the other two, as shown in Blaeu's plan from 1650. The first town, enclosed circa 1300 by a wall, contained a church – the Oude Kerk – a castle belonging to the counts of Holland, a Gasthuis and some Hofjes, warehouses and workshops and the usual complement of shops and houses. Continued expansion of industrial activity called for more land to be brought into development. About 1350 an eastward extension beyond the Verwersdijk, which had been constructed to control the natural waterway, nearly doubled the city's area. Former field drainage now acted as canals and reclaimed fields were divided into long, narrow, rectangular building blocks characteristic of the watertowns. Important changes also took place in the central area. The castle was converted into the town hall and its gardens provided the site for the marketplace. A terrible fire in 1536 destroyed about two-third of the city of Delft, so that a few buildings of earlier date survive, but the two principle churches escaped destruction and were completed in their present form by the end of the sixteenth century. Rebuilding proceeded in accordance with the same town layout, and was largely determined by the existing pattern of canals and the position of usable pilling foundations.'

The areas around the historical centre of Delft, where the railway, shunting yards and factories are located, are being rapidly freed up for new uses. In these areas an interaction can occur between the large-scale character

of contemporary society and the finely woven structure of the historical urban fabric. They allow for a web of new relationships as well as new forms of public areas and buildings within an innovative architecture.

The research studio, 'Hybrid Building' at the Delft University of Technology examines the possibilities of interweaving the various functions, types of space, and constructive systems found in Dutch cities. We asked ourselves the question what kind of architectural interventions could anticipate the hybrid character of the areas in Delft that are becoming available? We believed that partial interventions in particular, limited in scale and legend, could take advantage of developments that are still unpredictable. They are interventions that are characterized by continuity, clarity and exactness in a spatial sense, which are also able of including complex and changing uses. They can be justified by the locally existing urban structure, even if it is virtual, as in Joan Busquets' master plan for Delft.[1]

Here we present a few students' projects as a result of our research studios. They are related to various issues regarding the railway zone in Delft: 1) the transformation of the old station building, 2) a design for a hybrid building on a new, underground railway station, and finally, 3) a proposal for the rail zone in its entirety.

Delft lies in a peat moor, and as such, the development of the city is mainly based on the reclamation pattern of this peat region. The hydraulic engineering problems, the drainage of excess water, and keeping a constant water level, made the construction of a series of canals and an encircling city canal necessary. The building plots were located next to the canals, which have been built one by one over the course of time.[2] Until the mid-nineteenth century, the surrounding areas were empty and there was still no question of a national network of paved roads, railways and waterways. Until 1815 the Netherlands was not a unitarian state, so the construction of a nationally integrated transport system hardly got started. Around 1850 the country had three million inhabitants, which is less than the province of Zuid-Holland has now. The 'Grote Historische Atlas van Nederland, 1839-1859' (Large Historical Atlas of the Netherlands), shows that at that time Delft mainly consisted of the enclosed town that had developed between 1300 and 1650. [3]

The railway network that opened up the cities within the Randstad was built starting in 1840 and virtually completed by around 1880. Between 1842 and 1847 the train connection between Amsterdam and Haarlem via Leiden, The Hague and Delft was extended to Rotterdam. The loop around the Randstad cities was completed, via Gouda and Utrecht, and connected with Germany via Arnhem. The Randstad finally became visible. The lines are straight, the speed and length of the coaches only allow for gentle slopes and wide bends, which means that the railway cannot easily come into the city, at least not without drastically breaking through historical centres. Yet, railways were laid along the outskirts of the Randstad cities and the stations were built close to an existing route into the city.[4]

Railway stations

The first station building in Delft was no more than a temporary facility, just as other stations at that time: it consisted of a platform and several buildings enclosed by a fence. There were no precedents, and the railway engineers opted for a functional and constructive approach. Stations were simply technical constructions, or transport devices. However, to exploit the railway profitably, railway companies had to entice citizens to travel. Therefore, after some time, the comfort and reliability of the railways were emphasised with reception halls in a familiar style: the classicism and neo-Gothic architecture of the nineteenth century.

The first station dates from 1846 and stood at the intersection of the railway lines along the Westvest/Phoenixstraat and the Buitenwatersloot. The station building consisted of a protruding middle section of two storeys, with wings on either side: on the left, the goods office, on the right, the station master's dwelling. With stone, decorated guttering, and a blue tiled roof, the building indeed added to the architectural scenery of that time, but it mainly remains a utilitarian building.

As the most important representative of utilitarianism Durand had already developed rules at the beginning of the nineteenth century for the composition of buildings classified by function. His combination theory, a planning principle to combine material and spatial components together into a building, appeared pre-eminently suitable for the large-scale realization of the new building assignments of the nineteenth century (prisons, warehouses and office buildings). The Dutch approach to building stations was even more efficient. Around 1860 the State Railway Commission developed five classes of station buildings, which was the advent of building according to a standard design. This state station architecture was the basis for opinions of what a station should be: a representative reception hall that offers passengers appropriate comfort, combined with a utilitarian designed roof of glass and steel under which people could board and step out, a special combination of architecture and technology, where the difference is worked out expressively. The five standard designs varied in size, depending on the number of inhabitants in the city. The designs were simple: from the middle section, the plan develops symmetrically towards both sides. The five classes of stations form a typological series, but also from a stylistic point of view they could have similar shapes. Even though the stations built by the state offered housing for different activities, they possessed a high degree of neutrality and were therefore easy to adjust to the demands of the day. A number of stations from that time are still satisfactory from a functional point of view, despite the fact that passenger flow has increased tremendously.

Apart from the state, private railway companies also built station buildings. These were often not standard designs, but unique buildings, such as the second station in Delft built by the Hollandse IJzeren Spoorwegmaatschappij (Holland Iron Railway Company) in 1883, replacing the first one. The station is remarkable for two reasons: it is asymmetric and has a very distinctive turret. The design is monumental and the building plays a special role in the architecture of the city. The architect designed the station in the contemporary style of that period, the neo-renaissance style. The lavish decorations give the building a lively appearance. The sections of the programme are housed in five different sections: a main building with a turret, two wings of different lengths and two extremities of different sizes. The building parts are further organized in a very specific way. Therefore the station has become a monofunctional building that cannot easily be adapted to changing requirements. Now that the railway runs underground, the Delft station has become empty. The building is kept because of its monumental value, but its specific shape makes re-using it difficult.

Delft rail zone

For years Delft has been working on replacing the old station building and elevated railway installed in 1968 with a railway tunnel. The railway in Delft is a bottleneck in the line around the Randstad cities : the elevated railway offers no room for an extra fourth, overtaking railway; intercity trains cannot go through a bend in the line very fast. The tunnel offers the opportunity of improving the spatial relationship between the historical centre and more recent expansions. Since 1999 the city of Delft has had a project team, which looks after the realization of the railway tunnel in the form of a public and private collaboration, and has had the Spanish urban developer Joan Busquets develop a master plan for the rail zone. The precise route, length and building technology for the tunnel, the infrastructure of the intersection of train, bus, tram, taxi, car and bicycle, and the real estate have been developed through an interaction between Busquets and various consultation firms. A concrete proposal has finally been produced. Along with the railway plans there is room for 155,000 m^2 of housing (1,670 houses) and 20,000 m^2 of offices. The total area that will be available covers approximately 450,000 m^2.

From a formal point of view, Busquets' plan is in line with the linear structure of the historical centre of Delft, with streets that run in a north-south direction, parallel to the railway. Side streets follow the direction and dimensions of the adjoining district, Hof van Delft, and are secondary. In the most recent version of the master plan, existing and new water is the leading motivation in defining the eastern and western boundaries of the railway zone area and designing the space between what already exists and what is new.

An important starting point of the master plan is the adding of a number of monumental and meaningful public areas to the town. First, the western outskirts of the historical town centre, the Phoenixstraat/Westvest, will be transformed into a boulevard. The reference for this is the city walk round Delft, as developed for the eastern side of the town in 1837 by Zocher. In the same way as the original Bolwerk, the historical watercourse will be brought back to where the most important city gate was located until the mid-nineteenth century. The second reorganisation task is the road to Westland, the most important road from east to west between the city centre and Delft South. This road divides the planning area for the rail zone into two and will be transformed into a boulevard in the style of the green modernistic avenues of the high-rise districts of Delft South built in the 1960s.

The new public areas are included in the linear structure of the design: an elongated park on the roof of the railway tunnel that crosses Westlandseweg, a square in front of the old station building, a square near the Bolwerk, and a boulevard. The line of sight from the station exit to the tower of the Oude Kerk (old church) will be kept free.

In accordance with the size of surrounding buildings, the building will be three to five storeys high: low along the old town, high on the west side of the rail zone. The building typology of 'Busquets' plan deviates from the existing building forms: plots are not gradually filled in, but developed in one fell swoop with blocks of buildings in an exotic architecture just as with a Vinex location. The urban development plan is added to the concept of the intensive, multiple use of space. The building has a hybrid set up, with housing on top of a plinth of shops, offices and facilities. In the most recent version of the master plan, the tunnel route has been shifted in an easterly direction. A positive result of this is the addition of three green squares in the westerly part of the plan.

Important representative buildings in the project are the new station with the associated intersection infrastructure, planned right next to the old station and new council offices for all Delft local government officials at the Bolwerk.

Project 1: The old station building
Within the scope of his final project, Leo Boekestijn has researched the possibilities of re-using the existing Delft station. He has developed a solution for a topical problem, namely the re-use of a culturally valuable building, and shows how morphological and typological studies can be used to generate a new and unique design . Taking a number of striking examples, a building with a new programme, a new typology and a new visual language has been developed around the existing station and within the context of 'Busquets' master plan.

The station building built in 1883 has been retained in 'Boekestijn's plan, meaning that the outer shell, the original interior has already been lost due to various adjustments over the years. A new use has been given to the building: a design centre. The planning of the centre has proved to be so extensive that the rear of the station building was expanded by constructing new buildings.

There is now an untidy square in front of the station building. It forms the transfer point for all forms of transport. In Boekestijn's design, this square was transformed into more than just a space for pedestrians to loiter: it offered space for changing outside exhibitions and a flow of coming and going passengers to the new underground railway station. It forms a link between the historical centre and the town expansion from the second half of the twentieth century. It is a 'place to transfer' as well as 'a place to be'. There is a parking area behind the station building in Busquets' plan. In Boekestijn's design this parking zone is completed with a new building of some four to six storeys, connected with the station building by means of a walkway. The parking zone is transformed into a statue garden where people can walk, practice sports and play. The park descends from near the station building to a built-in exhibition area in the walkway.

Boekestijn's new addition is closely connected with the old station building from a functional point of view. It has been carried out in a contemporary abstract visual language and does not only accept the architecture of the old station as such, since the existing monument even seems to have become part of the whole. What already exists is added to what is new and not the other way round.

Project 2: The hybrid station building
Searching for a contemporary language of forms, also for stations, is continuously being done. Since the beginning of the twentieth century, stations have gained more meaning in public urban life and are being designed by prominent architects. Stations occupy a monumental position in the city and play a role in the architectural culture. In many cities in the Netherlands and abroad architectural competitions are held for stations. The design is more part of a specific architectural trend or the trademark of an architect than to something typical of stations. What remains is the split in the design of the platform roof as a typical example of an engineer's art and the rest of the plans, which is articulated in an architectural sense. In the first half of the twentieth century, the number of station buildings in the Netherlands was reduced from approximately 900 to 300.[5] As well, the station building became an intersection for all forms of transport. Architects, such as Schelling and Van Ravensteijn determined the look of station buildings in the Netherlands at that time, each from their own architectural point of view. From a functional point of view the shift of travel as a form of public activity in favour of transport as a utilitarian facility blurred the typical character of station buildings. The number of additional functions is initially kept to a minimum and the hall brought back to modest proportions, but in every station building a unique architectural expression is indeed sought after.

Since the 1980s railway architects have been trying to develop a company style again. This means that new station buildings are being designed as unique buildings indeed, whereas the series still must be recognisable. This has led to a high-tech revival and experimentation with platform roofs in an unparalleled way. A bar here, a wire there, some twisted plates glass, and there you have it, a station. In this process the station loses its monumental appearance in the urban fabric. Many have seen this as a loss for the town: again the disappearance of a recognisable type of building. The station has become a transfer machine.

This offered unexpected opportunities. As a transfer machine the station generates a large flow of visitors, which brings them into contact with all kinds of commercial activities. Eventually, the multifunctional centre with a public transport intersection was born, from which Rotterdam, The Hague and Utrecht could benefit. The station was transformed into a hybrid building for complex and changing commercial functions.

For the Delft railway zone Chris Bloemen has examined which typologies and compositions are able to anticipate the urban network of the twenty-first century. How can the railway zone be compressed into a vital intersection from a programmed and spatial point of view, and what are the architectural characteristics of buildings that replace the traditional city centres around the town hall, the church and the market?

Starting from the outlined developments of the hybrid station building, Bloemen gives a centre function to the intersection of transport systems in Delft. Offices, shops and other facilities, but also houses are brought together in a high building density. Important elements in Busquets' master plan are the two main directions: one in parallel to the railway, the other perpendicular to it, following the allotment direction of the first expansion of Delft in a westerly direction. Bloemen made use of this characteristic and has planned a building of seven to nine storeys on the south side of the current station square, right above the railway line, so that passenger flow goes directly from a new urban square with accommodation functions to the platforms. The relation between the station square and the historical centre can be easily made via the new boulevard to be developed along the Westvest/Phoenixstraat. The transfer intersection with stops for buses and taxis and parking spaces for cars and bicycles has been built on the other side of the building. The urban square and the transfer intersection are connected to each other by way of a sunken shopping street. This street also offers direct access to the station concourse, where offices in the block of buildings next to and above it are planned. Continuous surfaces and open intersections offer unexpected opportunities for the hybrid building.

Project 3: The Delft Railway Zone
Floris Cornelisse has produced an urban development design for the Delft railway zone with the improvement of the connections between the various districts of Delft as its objective. The design is structured around two axes perpendicular to each other, designed as an esplanade, which connects important public areas. The northern axis follows the historical city wall, whilst the southern axis follows the railway line. The intersection of these axes can be found at the Bolwerk. The design includes the transformation of the 'NV Gist- en Spiritusfabriek' (Yeast and Alcohol Factory) into a residential area. This also includes interventions in the Westvest/Phoenixstraat and the station area, and the transformation of the industrial region between the railway and the Rhine-Schie Canal into a residential area. The transformation of the factory premises has been worked out architecturally.

This ground lies between a factory workers' district, the Agnetapark, and a city park, the Koningsplein.[6] On the eastern side it is bordered by the Rijn-Schie Canal, the old water trade route between Delfshaven and Leiden. The design fits into the existing green character and follows the idea of a garden city with continuous open rows of houses. Courtyards are located at two special locations, which enclose the monumental remains of the factory. Water is planned on the outskirts of the town centre, a mirror image of the pool at the south-west corner of the historical centre, linked to the restoration of the historical watercourse, something already proposed in Busquets' plan. A yacht harbour and cultural facilities are planned at this new pool: a dance school, theatre school, cinema, and concert hall are housed in old factory halls, and the city records office and the library in new buildings. The heterogeneous planning of old and new buildings and squares, waterparks and arcades suit the informal character of the adjoining park and the old industrial buildings.

These interventions can be seen as a construction of urban necessities. Every part has specific characteristics without wanting to be complete and self-supporting. They need each other and supplement each other. The spatial experience of the city is strengthened, with people meeting each other while going from the one location to the other. The districts are independent as well as dependent on each other. Architecture is used to give shape to this area of tension: it is architecture of complementary places.

Notes
1. City of Delft, Joan Busquets, *Spoorzone Delft, een visie op stedelijke verbetering* (The Delft Rail Zone, a view on urban improvement). Delft 1999.
2. G. L. Burke, *The Making of Dutch Towns*. Bristol 1956.
3. Wolters-Noordhoff, *Grote Historische Atlas van Nederland* (Large Historical Atlas of the Netherlands), *West Netherlands 1839-1859*. Groningen 1990.
4. H. Romers, *Railway Architecture in the Netherlands, 1841-1938*. Zutphen 1981.
5. P. Saal, F. Spangenberg and R. Hordijk, *Kijk op stations* (A look at stations). Amsterdam 1983.
6. The Agnetapark 1 by Zocher, Kerkhoff and Kugel from 1882 and Agnetapark 2 by J. Gratama from 1926. See W. Wilms Floet and E. Gramsbergen, *Zakboek voor de Woonomgeving* (Pocketbook for the Environment). Rotterdam 2001.

[Polemen]

The European City: Architectural interventions and urban transformations
An international conference in Delft and Antwerp

François Claessens

In the last days of October 2004, the cities of Delft and Antwerp hosted the EAAE (European Association for Architectural Education) conference on the 'European City'. This international conference, jointly organized by the Delft University of Technology and the Henry van de Velde Higher Institute of Architectural Sciences, focused on the interaction between 'architectural interventions & urban transformations' both past and present.

The organizers of the conference departed from the following statement: 'The history of Western architecture is intimately bound to the development of the European city. From the Antiquity to Gothic times, and from the ages of the Renaissance, Baroque and Classicism to the industrial era, the ensuing urban architecture determined the characteristic composite form of the European city.'

The conference investigated the role and impact of architectural projects, based on the formal identity of the European city. For this purpose the following questions were asked: 'How do architectural interventions contribute and catalyse the process of transformation and renewal of existing urban areas both today and in the past? What are the programmes, typologies and architectural languages that anticipate these continuous processes of urban transformation in Europe? Also, can the architectural idea of a "European city" still persist in a time of ongoing globalisation or has it become an anachronism?'

At the conference, professionals and academic scholars from Europe and the United States presented some 50 papers. These presentations took place in Delft during the first two days of the conference in 12 parallel sessions, grouped according to three major themes: 1) typo-morphological studies, 2) research by design, and 3) theoretical studies.

Papers addressing the first theme contained design research of urban areas in European cities that examine the coherence between the urban morphology and building typology. They addressed questions, such as what are the typological and morphological elements that characterize the specific form of the European city and how do transformations in urban morphology effect changes in building typologies and vice versa. By way of case studies the presentations focused on different urban scales and building types, such as the relation between city and territory, between the urban block and public buildings or dwellings, and the morphological development of specific European cities.

Papers on the second theme discussed design studies for urban areas in European cities, which examine the spatial potential for transformation and renewal by means of concrete design proposals, such as 'architectural interventions'. These sessions addressed the following questions: Which building typologies, programmes and architectural languages can contribute to the renewal of urban areas, and how can new architectural interventions be related to the existing urban structures? The presentations not only demonstrated architectural projects, but also urban and landscape projects. The 'Research by design' theme was addressed for the first time at the EAAE conference of 2000 in Delft.[1] According to the number of entries on this theme, 'Research by design' has now become a regularly accepted form of architectural research at European architecture schools.

Papers on the third theme examined the theories, methods and techniques of both urban analysis and architectural design. These sessions dealt with the questions why and how typo-morphological research should be a pre-requisite for architectural design and what the innovative ideas and techniques in the field of design methodology and design studies are. The presentations clearly showed the current dynamics and broadness in the international fields of theory and methodology.

At the end of the first day in Delft, an exhibition was opened entitled *Drawings of the City*, which displayed some of the research conducted at the Delft University of Technology by means of drawings. The exhibition displayed the different ways in which drawings work as tools in both analysis and design. Drawings not only 'render future visions intelligible', but they can also 'be considered as a continued mode of recording change or of proposing a new mode of analysis and presentation', as the curators stated in their introduction to the exhibition. As well on this occasion, the first issue of *OverHolland* was presented. The international audience and the theme of the conference appeared to be the appropriate setting for the launch of this new series.

Later that day, at the historic town hall of Delft, alderman Grashoff presented the city's plans for the redevelopment of the railway area on the border of the historic city centre for which Spanish architect Busquets developed a master plan. At that moment the alderman could not foresee that a few weeks later the city plans would get the green light from the Dutch government, which granted a large financial contribution to the project.

Several distinguished keynote speakers addressed the conference during the three days: dr. Anne Vernez-Moudon (professor at the University of Washington in Seattle and president of the International Seminar on Urban Form – ISUF), Anthony Vidler (dean of the Cooper Union in New York), Jo Coenen (architect and professor in Delft), dr. Piet Lombaerde (professor in Antwerp), and Bernardo Secchi (urban planner and professor in Venice). They reflected on the themes and questions of the conference, based on their experience in architectural practice as well as from their university teachings and research. Although starting from different architectural perspectives, these architects/theorists share the idea that we can continuously shape and re-shape our cities with architectural interventions.

On the third day of the conference, the participants left early in the morning for a trip to Antwerp. At the Henry van de Velde Institute a plenary closing session took place, where the chair people of the different sessions formulated and discussed their conclusions with the participants, resulting in a joint conference declaration.

In the afternoon an excursion to different sites in and around the city was organized under the guidance of André Singer, CEO of the development company Project, where new architectural projects are realized and future developments are planned. [2] The sites visited were the North Emplacement (Secchi), the Royal Entrepot (Kollhoff), the 'Eilandje-Kattendijkdok' (various realizations in progress), and the Court House (Rogers).

After a reception by the Deputy Mayor Van Campenhout at the historic city hall of Antwerp, there was a wonderful farewell dinner at the converted old monastery Elsenveld, the perfect setting for the closing of four intensive yet rewarding days. Many new contacts and friends were made and old ones renewed. Although debates were sharp and opinions were not always on the same lines, everyone agreed that it was an intellectually and socially stimulating event, with some participants already making plans for a follow-up of the conference. A collection of the papers and keynote lectures has been published in the conference proceedings.[2]

Notes

1. See: A. Langenhuizen et al. (eds.), *Research by design*. Delft (DUP Science) 2001.
2. François Claessens and Leen van Duin (eds.), *The European City: Architectural interventions and urban transformations*. Delft (DUP Science) 2005.

Can cultural heritage save Dutch planning?

Ed Taverne

Physical planning in the Netherlands has during the last decades become such a wide and complicated field that criticism hardly has any effect anymore. Even worse, professional criticism is stone dead. Of course, a lot of stories about high-profile strategic projects and project organisations can be read in daily and weekly papers or on Internet (Archined), but there is no suggestion of any reflection on the theoretical principles of such a pragmatic professional practice. Criticism does not succeed in breaking through the logic of strategic planning processes and linking these to other social and cultural trends.

Illustrative of an physical planning that is largely focused on consensualism and practice is the popularity of the so-called *Map of the Netherlands*, on which the physical design of the Netherlands is reduced to an arbitrary collection of projects, assembled together without comment or criticism. If there really has to be a map of the Netherlands, I would prefer one with a more intelligent legend: a large-scale basic map of the Netherlands on which the countless, overlapping authorities, jurisdictions and regimes of the many administrative layers of government and public bodies are plotted for each area with the greatest possible precision – a kind of military map of administrative and judicial obstacles that provides a eloquent picture of daily planning in practice.

During the past decades governmental planning policy and daily planning practices have evolved along the natural law of communicating vessels. Unclear, wishy-washy, and inconsistent political choices mean that the damage of a non-policy can only be neutralized by more rules and regulations. In that respect there is not much difference between physical planning and the government's anti-smoking policy. Instead of facing problems head on and entering into the political debate about – for example – the suppression of a free market and the right to free settlement, the government advertises that (sub)urbanization, just like smoking, is harmful and leaves the causers of the damage to fight it: local politicians, investors, land owners, and project developers who all have something to gain from (sub)urbanization. Subsequently, central government tries again to control the damage spiral by enforcing an even closer-woven patchwork of regulations and procedures. Instead of the necessary restricting of (sub)urbanization (like the repression of tobacco production), several soft regimes are deployed such as the conservation of nature, monuments and environment (smoke-free zones) or the projection of traffic-free residential areas, 30 mph zones and the restriction of innercity parking.

Due to this political weakness, strengthened even more by the increase of social players in the field, urban planning in the Netherlands has been deteriorated into a 'form of negotiation with little cultural content'. What is the alternative? The director of the Netherlands Institute for Spatial Research has recently sketched a new perspective on public planning in the Netherlands in which consensus has been replaced by inspiration

and culture in stead of negation functions as a strong binding element. In this plea for more culture in physical planning, he follows the new trend launched recently by the *Belvedere Policy Document,* in which the institutional framework for Dutch planning is 'enriched' with such new ideas as cultural planning and heritage planning. In this way, culture becomes the new smoke-free zone in an otherwise poisoned environment. In my opinion, this is a one way road that will further burden the already cumbersome planning machine in the Netherlands, and will sooner accelerate rather than halt the advancing disenchantment and disneyfication of the Dutch national territory.

Cultural infrastructure

Culture, within the meaning of image and image production, appeared on the Dutch planning stage half way through the 1980s when planning, mainly based on zoning and control, made room for one that focused on seduction and inspiration. This was the moment when urban renewal was exchanged for urban innovation and city councillors put their cards on all kinds of city marketing focused on attracting business and promoting the city as an ideal place for private enterprise and tourism. Urban innovation has given Dutch design culture a tremendously qualitative impulse and provided architecture with a structural place within the Dutch planning machine by way of numerous new cultural institutions. Since then, internationally, the Netherlands has been enriched by a unique cultural infrastructure in the field of architecture, landscape architecture, urban planning and cultural heritage. But there was more: urban innovation was not limited to the trade in architectural images, the branding of cities, or the production of urban planning schemes: it paved the way for a new, political vision of spatial design, not only of the large cities, but of the whole national territory of the Netherlands at the end of the 20th century. These were the days when the Dutch Labour Party still organized workshops about 'the future of the city', about city politics and urban development in the Netherlands (see Maarten Hajer and Femke Halsema, *Land in zicht!* (Land ho!), 1997, or René Boomkens et al., *Stad zonder horizon* (City without horizon), 1997. Such intellectual energy is strongly lacking at the beginning of the 21st century.

Belvedere

In 1999 a number of ministries signed and published a document called the *Belvedere Policy Document,* which was surprising at first. Following the architects, now historians and in particular archaeologists and all kind of conservation institutions' and art officials demanded and got to play an active role in the planning and execution of spatial policy, especially at the national level. But in contrast to the 1990s when the call for strengthening culture was imbedded within a wider process of cultural modernization, the Belvedere philosophy propagated the strengthening of the Dutch cultural identity in a rapidly changing environment. One could speak of an officially stimulated, regressive branding of historical innercities and landscapes, 'as an answer to the increasing demand for new sources of spatial identification and distinction in the midst of a reality in which established frameworks of identification and distinctions (such as that of nation, standing, religion, modernity and region/town) have become less clear' (Mommaas).

The *Belvedere Policy Document* was the product of the synergy between two political ambitions from the final days of the liberal/social-democratic or 'purple' government. First, the large-scale, physical reconstruction of the Netherlands of which the Betuwe railroad traject, the South HSL, and the Vinex (housing) operation are the best known examples, and, secondly, the cultural political option of the former State Secretary Van der Ploeg (Dutch Labour Party) to present culture and art in a more accessible way to the public. These two aspects came together in Belvedere under the common denominator of a development oriented application of national heritage: the relentless disruption and opening up of landscapes and the underground archive was seized for a public education in the nation's military, economic and architectural history.

Belvedere represents two things: the reinforcement of physical planning by all kinds of historical, cultural disciplines as well as the reorientation of conservation planning towards a more development oriented vision. In the first case, designers (architects, urban developers, landscape architects) are addressed, and in the second, scientists (geographers, archaeologists, art historians, and monument conservationists), art administrators, and finally, also the public as well. To support these political ambitions, a complete new bureaucratic framework was invented: no fewer than 70 historical geographical areas (smoke-free zones) were designated where the link between cultural policy and spatial policy had to be tested. But it did not stop there: design studios were also set up, two new government architects and advisors were appointed for cultural heritage and landscape, three special university chairs were created, an individual Project Agency was established, a few government institutions such as RDMZ (Netherlands Department for Conservation) and ROB (National Service for Archaeological Heritage), which until that moment led a sheltered existence, were reanimated into knowledge centres and the cultural and historical information, fragmented across innumerable organisations, was brought together in *De Kennisinfrastructuur Cultuurhistorie* (KICH) (The Knowledge Infrastructure for Cultural History) to which, along with ROB and RDMZ, the Expertise Centre INV (Agriculture, Nature and Nutrition quality) and Alterra also belong. In order to allow Belvedere to actually affect government policy, it was governmentally anchored in the Culture and Architecture Policy Document and, finally, in the *Space and Culture Action Programme, Architecture and Belvedere Policy 2005-2008*, the cultural answer of the completely culture deprived *Space Policy Document,* recently published by seven ministries. This has provided an official and administrative cultural palace, which has been established in a very short time, and is unparalleled in the architectural history of the Netherlands.

Two maps

It is, however, questionable whether spatial organisation, the daily planning practice, is helped by the institutionalization of cultural history and conservation philosophy into an new kind of planning policy: cultural planning. As if careful association with the historical and geographical layers of the landscape and the historical qualities of city and landscape is something that can no longer be achieved through regular urban planning and design and requires a new set of rules and controls. By isolating culture from the official spatial policy, the government goes in the direction of landscaping the Netherlands in two different ways: on the one map, the historical structures, monuments and landscapes are sketched as historically cultural spots that not only give the tourist, but also the designer the feeling that they are in familiar surroundings. On the other map, these cultural landmarks are missing and the administrators become free ways for developing all kinds of new infrastructure, housing and commercial activities. All in all this implies the structural erosion of urban planning as a scientific discipline as well as a planning practice. And then to think that already in the *Third Report on Physical Planning*, the careful association with cultural history in the sense of 'historical and/or visual landscape views with a higher experience value', such as river views, waterfronts and polder views were considered to be an integral part of the government's involvement with the development and organisation of urban and national regions.

Even the designing disciplines, architecture in general, are expected to make a contribution to the 'cultural identity issue'. Architecture must be reclaimed as a recognisable carrier of identity, implying a greater orientation of contemporary design towards the historical architecture and historical stratification of the (urban) landscape, to the interweaving of old and new. There are at least two dangerous sides to this plea: by elevating a series of randomly selected spatial artefacts, such as historical buildings, fortification lines and road and water systems to the status of anchors or landmarks, the fact is ignored that the cultural and historical essence of the 'architectural beauty of our country' is not limited to isolated objects or arthistorical styles, but to the unique, if somewhat difficult to observe, historical connection between the expansion pattern of cities, the physical shape of urban areas, and the architectural elements and technical constructions from which these are built up.

The dynamics that are so characteristic to our cultural landscapes is halted by reducing culture to the 'creation of an aesthetic environment'. The pretentiousness to 'produce new culture during the re-design of our national territory' is just as ahistorical, ludicrous and pathological as the fanaticism of nature developers to enrich the Netherlands with 'new nature', which threatens the classical river landscape of the Betuwe. There is also a second objection: by linking the cultural identity of, for example, the Randstad to historical artefacts and landscapes in such a unilateral and normative fashion, one loses sight of the multiformity of identities that are not bound to the 'spirit of the location' and that are more likely to be associated with networks of '1001 collectives that literally and figuratively open up new horizons', such as in Vinex locations, but also along motorways and in the public areas of Schiphol, the Arena, or Utrecht Central Station.

Cultural biography

The real connection between urban planning and culture cannot be found in cultural history, but rather in the capacity of all parties involved to discover the socio-cultural dimensions of contemporary programmes of globalization, networking and multiculturalization, and not, conversely, to control and soften with traditional culture the energies and uncertainities caused by these within contemporary society. What is needed, is a different way of looking at things. Another kind of planning research, for which recently an inspirational initiative has been taken by an interdisciplinary urban consultancy team in a study on *De Strook. Ruimtelijke ordening in een cultuur van pluralisme* (Urban planning in a culture of pluralism, 2001). For one reason or another, the results of these sorts of cultural planning studies do not effect recent policy proposals or insufficiently, just as with many other new concepts and ideas within geography, economy and cultural history. This situation is of course reflected in the physical environment of daily life of which the organization and design are not in tune with the logistically complicated programmes they are expected to facilitate. Instead, both policymakers and scientists cherish rather naïve ideas about the practical relevance and use of our cultural heritage.

Professional cultural historians too have their doubts about the pretensions of policymakers to emphasize, articulate and include the past in current processes of identity. Even though greatly divided across the contemporary historical experience, there is a dominant conviction within these circles that

'culture' is less connected with physical artefacts or landscapes themselves than with stories and rituals told and invented by people in wich these objects figure and to which they refer. Urban settlements, fortification lines, land reclamations and other monuments and infrastructures are nothing more than traces or reference points to establish what various lifestyles were at certain times and locations and within socio-cultural groups. Cities, landscapes and architectural objects and systems are not timeless objects, but have a life story that can be told within the historical and literary genre of cultural biography. This more dynamic view of heritage has led to new museological practices and presentation techniques in several locations in our country, such as in Maastricht and South-East Brabant. It has also created a cultural infrastructure that is initially aimed at making traces from the past legible, as are available in all their diversity, radicalness and intangibility in the daily environment, and placing them in an for the general public accessible framework. It is, however, questionable whether the articulation of the many histories of town and landscape, from the national military past or of the water administration must also be institutionalized as a specific area of policy of physical planning. I do not think so, as taking into account the disciplinary origin of all parties involved, I fear that as a consequence of these politics the last remains of our heritage, where the 'real' history can still be experienced, will disappear from the map of the Netherlands. The shift that ecologist Matthijs Schouten claims to observe 'in the perception of nature as vulnerable heritage to producible commodity' also greatly applies to our architectural heritage!

Save and renew

Several years ago, in a book of essays about heritage planning in the 21st century Geert Bekaert asked the question 'Can heritage save architecture?' Confronted with the still deeply cherished contrast between the historical monument and current architecture, he pleaded for a different set of ethics with regard to the conservation of historical artefacts. For an architectural attitude wich is not interested in colonizing culture and history within contemporary planning practices, but rather to approach them as 'civil realities' unselfconsciously situated in the present. Here, Bekaert admits, and I agree with him, to propose a strong modernistic opinion about urban design and planning: one that suggests that these disciplines must be cultural even *without* the history, and that the past is only attractive and sensational because of its strangeness and distance in relation to the present. No more than history is able to do, cultural heritage cannot save Dutch spatial planning. However, it is possible to develop a spatial design policy in which our increasingly scarce cultural heritage has a chance to be saved and revitalized.

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Book Review

Leen van Duin

Hans Ibelings
Onmoderne architectuur
Hedendaags traditionalisme in Nederland
Rotterdam (NAi) 2004, 144 pages.

Onmoderne architectuur (Unmodern Architecture. Contemporary Traditionalism in the Netherlands) by Hans Ibelings is the latest publication of the Fascinations series from NAi publishers, a series of booklets in which various authors focus on a topical theme. In five short chapters the author draws attention to an unmistakable, present-day architecture that looks as if it originated from the past. This architecture is rapidly gaining popularity amongst a large segment of the public, which some Dutch architectural firms respond to in a clever way. Inspired in part by foreign architects such as the Krier brothers, these firms have developed a number of new, mass-produced districts at Vinex locations in a style Ibelings calls 'contemporary traditionalism'. He reserved more than half of his booklet for illustrations of projects from these architectural firms, mostly photographs of exteriors. Descriptions, plans, sections or details are lacking.

The publication comes at the right time, as it is about time that somebody attempted to give contemporary unmodern architecture in the Netherlands a place within architectural criticism. Unlike in his article 'Het andere modernisme; traditionalistische architectuur in Nederland 1900-1960' (The other modernism; traditionalistic architecture in the Netherlands 1900-1960) in *Archis* 6-88, Ibelings makes no attempt to conceptualize the current discussion on the relationship between architectural design and traditional forms. If one regards traditionalism as the fundamental following of and conforming to tradition, then it is necessary to provide a clear description of the concept and trace its origins. Where Ibelings the historian in 1988 distanced himself from the craze of the day and painstakingly looked for meaning, context and concept, in short: the 'how' and 'why' of a well-defined approach to an architectural assignment as traditionalism, *Onmoderne architectuur* mostly addresses the 'what' and 'when'. Insofar as Ibelings places contemporary traditionalism against a historical background, he considers it as a consequence of the post-modernistic wave that has washed over the Netherlands since the 1970s, incidentally just as the 'new urbanism' movement did.

Ibelings the publicist gets carried away by the turbulent developments and presents the reader with an abundance of illustrations entirely according to the post-modern formula, which removed from their historical context can be quickly and easily consumed.

Since Ibelings places contemporary traditionalism in line with post-modernism it is understandable that he does not attempt to make a connection with traditionalism as developed as a powerful movement along with modernism at the Delft University of Technology in the period between the two world wars. He sees contemporary traditionalism as an exponent of the current situation in the Netherlands, where each project must be newer than new, and even a seemingly traditional approach with a retro touch is regarded as new.

With his journalistic approach he skips over the fundamental question he asked earlier, that of the relationship between the past and present-day traditionalism, a missed opportunity. In doing so he restricts himself to an in itself useful inventory of examples in which the typically Dutch pursuit of originality, experiment and novelty is placed against the predilection for the past of firms such as Krier and Kohl, Vandenhove, Natalini, Soeters Van Eldonk Ponec, Molenaar and Van Winden, Scala, Mulleners and Mulleners, Yanovshtchinsky, Geurts and Schulze, Claus and Kaan.

The reader is also provided with a selection of some international publications about traditionalistic architecture from Russell Hitchcock to Lampugnani, and from Pigafetta to Abondandolo, leading to an outline of moments in post-modernism that were important to the institutionalization of contemporary traditionalism and the pursuit of aesthetic coherence in cities.

Finally, along these lines, Ibelings also discusses government policy, which under the name of 'Belvedere' commands architectonic design with attention to cultural and historical quality. From the perspective of Belvedere, which is aimed at closing the gap between the past and the future, three major urban projects are reviewed: The Schuytgraaf district of Arnhem, Brandevoort in Helmond, and Haverleij near Den Bosch.

In the end, *Onmoderne architectuur* describes contemporary traditionalism as the niche marketing of nostalgic images. It is about architecture with a cinematic character that must offer a total experience and considers the city as an amusement park, full of 'better than life' attractions. Due to the lack of proper architectural criticism, the significance of traditional forms for the design and development of a specific approach of an architectural assignment is not thematized. An attempt to analyse or position can only sporadically be found in architectural magazines. It seems that until now, besides the real estate developer and of course Prince Charles, nobody actually knows what to do with the longing for good old architecture. Already in 1978 on the basis of an analysis of the oldest architectural magazine in Europe, Britain's *Architectural Review*, the historian Taverne (Wonen – TA/BK 16-78) ascertained that reverting to movements in the past with their easily recognisable symbols and rich, associative capacity is reassuring for the satisfied, middle-class consumer. And now, 25 years later, it appears that the role assigned to the architect, as a supplier of images that appeal to the demand of the middle-class, has now become generally accepted. The contemporary traditional architect renders his services without reserve to clients in their pursuit of the realization of romantic, picturesque images, which differ from the prevailing, albeit ground-losing modernistic images, now perceived as cold. All this is done under the motto 'What is it like to live in a picture?'

The residential areas for people who can buy their own house quickly transform into theme parks. The new district of Brandevoort, for instance, consists of a few suburbs in a 1930's style, located around a picturesque 'Veste' which is enclosed by newly dug castle moats. As in Almere or on the banks of the IJ in Amsterdam where the Amsterdam canals were copied, mediaeval fortifications were built in Brandevoort. The architecture is supposed to create the illusion of a gradually grown ensemble of Dutch houses, which have been given an old fashioned appearance for a reasonable price. Rob Krier set up

the plans for this 'gated community'. Why is a retro architect like Krier so popular in the Netherlands? The answer is quite simple: a housing association, usually the client in the Netherlands chooses just as easily a modern architect as, one week later, Krier or one of his followers. The housing consumer, who first wanted a modern lifestyle, is now asking for nostalgia. He wants to live in a romanticized past. And the customer is always right, so the architect invents this past for him. Since the mid-nineties things have gone quickly. Almere got a castle, Coevorden wants to start building one, and in Haverleij near Den Bosch, a thousand houses in the shape of compact castles have almost been completed.

A 17th century fortress city or a French Loire castle, everything is possible as long as they are recognisable places for the digital and hypermobile man who wants a sense of security in his environment. When future archaeologists discover the remains of Brandevoort or Haverleij in 400 years from now, they will find a tough job when it becomes clear that they have stumbled upon concrete replicas of castles that have never existed.

Retro is a sign of the time. Sometimes, I am also tempted by the apparent security and attractive pictures of Rob Krier and his followers. There is nothing wrong with a journalistic publication like that of Ibelings. However, it is the task of architectural criticism to conceptualize and analyse today's unmodern architecture. It is also important for the architectural practice, if it wants to do more than just following consumer trends. For future large urban projects in the Netherlands, research into the development of the Dutch city will be more necessary than ever. This does not mean copying them, but rather to be able to cautiously move between historical knowledge and today's current issues. One cannot expect such type of research from commercial agencies. It is a task for architectural schools, where people can work independently from market pressure. Cooperation between the various disciplines, which work at the environmental planning of the Netherlands, is a prerequisite, as is the case within the research programme 'Urban Architecture' at the Faculty of Architecture of the Delft University of Technology. If this research points to elements that are not only important to traditionalism, but also considered essential for architecture in general, such as shelter, the recognizability of urban facts, the city as the place for collective memory, then I will report.

About the authors

Henk Engel (1949) is an architect and at present co-director of the architecture office De Nijl Architecten in Rotterdam. In 1998 his office had an exhibition on their work in the NAi, which was accompanied by the publication *Als we huizen bouwen, praten en schrijven we* (NAi 1998). Engel is an associate professor of Architectural Design in Delft, and teaches at several Academies of Architecture in the Netherlands. He was visiting lecturer in Liverpool, Milan, and Pescara. He wrote extensively on various topics concerning modern and urban architecture, and worked on several exhibitions, amongst which are Frankfurt am Main (1987), Colour in Architecture (1986) and the work of De Stijl en J.J.P. Oud.

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Reinout Rutte (1972) studied history of architecture at the Free University of Amsterdam and historical geography at the University of Amsterdam, where he also finished his PhD on *Stedenpolitiek en stadsplanning in de Lage Landen (12de-13de eeuw)* [Urban politics and city planning in the Low Countries, 12th-13th Century] (Walburg Pers 2002). He is editor of *Historisch Geografisch Tijdschrift* and published several articles on the history of the city and urbanism in the Netherlands, in particular on the period between the 12th and the 15th century. He edited the book *Stadswording in de Nederlanden. Op zoek naar overzicht* (Uitgeverij Verloren), published in the spring of 2005. Rutte is co-author of *Tussenland* (NAi 2004), a groundbreaking study commissioned by the Dutch State Planning Office on contemporary developments in areas between city and countryside in Italy, Poland, the Netherlands and Scandinavia. Since 2004 he is an assistant professor of Architectural History at the Faculty of Architecture of the TU Delft.

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Iskandar Pané (1974) graduated in architecture at the TU Delft in 2000. His thesis project was published in *Hybrids* (Delft, dup, 1999) and *Hybride gebouwen en architectuur van de stad* (Delft, DUP, 2001) and was part of the exhibition of the international conference *Research by Design* (2002). He is now a researcher at the Department of Architecture of the TU Delft. His research activities include mapping the transformation of Dutch cities, De Randstad, Deltametropolis. The research results were presented at the international EAAE conference *The European City* (2004) and have been published several times. Since 2000 he is also working for De Nijl Architecten (Rotterdam) as an architect.

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