Town and countryside in a Dutch perspective

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Prof dr Pim Kooij (photo Studio Gaaikema)

Preface

On 1 January I concluded my academic career, which began in 1963 when I started my studies in history at the University of Groningen. As my CV later in this book shows, I have been associated with this university ever since, working in a variety of positions. In 1998 I took on an additional position at Wageningen University, where my distinguished predecessors Bernard Slicher van Bath and Ad van der Woude had prepared the way for me.

Slicher van Bath was an example to me in more ways than one. From 1949 to 1956 he was a professor in both Groningen and Wageningen. In that last year he went to Wageningen full-time and was succeeded in Groningen by Han Baudet, who taught me the discipline and was my PhD supervisor. What I particularly appreciated about Han was that he preferred to inspire rather than control his students, so that the responsibility for learning and research was mainly your own. Han was succeeded by Rainer Fremdling, who remained in the Faculty of Economics after I moved to the Faculty of Arts in early 1997 – accompanied by several colleagues – and was appointed professor there after having held a position for ten years as professor by special appointment of Regional History.

However, even when I worked at the Faculty of Economics I had a lot to do with the Arts Faculty because I was closely involved in the teaching side of the History programme. When dividing my time in this fashion between the two Faculties came to an end, the position at Wageningen was added. As a result, I always operated in two worlds, something I found very inspiring because it automatically leads you to take a multi-disciplinary approach. This was not only because of my colleagues, but also because the students came from many different degree programmes. Especially Environmental history, a subject I taught in both Groningen and Wageningen, offered a particularly interesting mix of disciplines and nationalities.

This volume shows clearly how my research has evolved over the years. In 1970 I graduated with a thesis about the first users of electricity in the city of Groningen. This led me to urban infrastructure and then to urban history, a discipline which was just starting to take shape at that time. Since then urban history has been a constant in my work, and several times the city of Groningen has functioned as a laboratory for that work; specifically, I have studied education, health care and the diffusion of innovations in the context of this particular city.

Cities should not be studied in isolation, but in relation to other cities and the surrounding countryside. This brings urban networks, infrastructure and migration into the picture. I have devoted a lot of attention to migration in particular; and from the relationships between the town and the countryside it is only a small step to regional history, the domain of the Integral History project (1987-

1991), which compared the Groningen region with clay soils and a region with sandy soils in Brabant. I led this project in conjunction with Theo van Tijn and Gerard Trienekens of Utrecht University, and Marten Buist of the University of Groningen. The project resulted in six PhD theses and several monographs.

In 1991 I continued the project with Russian researchers, who needed a new methodology in the framework of the reorientation taking place in Russia at the time. This proved to be a very fruitful collaboration, resulting in two volumes entitled *Where the Twain Meet*. This form of regional history was not very far removed from the history of the countryside and of the green space – a connection which also explains how an urban historian ended up at Wageningen University, which until 1998 had been called an Agricultural University.

Cities, the countryside, regions and the green space are clearly the domains which have always been the focus of my work. These are geographical entities, and spatial aspects have in fact also occupied a significant position in my work in addition to social and economic factors. In recent years I have also made some expeditions into the fields of politics and culture.

The essay about the Randstad which is included in this volume was written jointly by Paul van de Laar and myself. I have written articles in collaboration with several other people as well. It would have been easy to compile a volume called 'With a Little Help from My Friends', though in fact that help was always substantial. The literature list at the back of this book includes several titles I produced in conjunction with my closest colleague Maarten Duijvendak, and I also worked with Aukje Mennens-van Zeist, Vincent Sleebe, Jules Peschar, Piet Pellenbarg, Lydia Sapounaki-Dracaki, Geurt Collenteur, Richard Paping, Daan van der Haer, Minnie Baron and Ben Gales. In every case this was very inspiring. The same applies to the supervision of PhD students, which I also often shared with others, as the list in this volume shows.

I drew a great deal of inspiration from my international contacts. In particular, my 12 years as Secretary of the European Association for Urban History placed me right in the vanguard of urban history, especially because it involved organising a big conference every two years. The Chair changed every two years, but all the time I was there Peter Clark was the Treasurer, and we always worked together very closely and very well. The Commission Internationale pour l'Histoire des Villes and the CORN group (Comparative Rural History of the North Sea Area) were extremely inspiring bodies, while as a result of the annual Flemish-Dutch Historical Conference I had many activities and offices in Belgium.

In my case two universities also meant two departments and two groups of staff. This short preface is not the right place to mention and thank everyone who worked there over the years. I will limit myself to the veterans: J.W. Drukker, Gé Prince, Geurt Collenteur, Maarten Duijvendak, Richard Paping and Vincent Tassenaar in Groningen; Anton Schuurman, Jan Bieleman, Margreet van der Burg, Aicha el Makoui and Leandre Bulambo in Wageningen; and Er-

win Karel, Hanneke de Vries and Wyke van der Meer of the Netherlands Agricultural Historical Institute, who were very helpful in producing this volume, as was Saakje van Dellen in the case of previous *Historias*.

Beyond this, the volume will have to speak for itself. Most of the chapters have already been published elsewhere. References are provided, with thanks to the publishers who gave their consent for the articles to be reprinted.[1] Other chapters include articles specially translated from Dutch for this volume, a previously unpublished conference paper and an English version of my farewell address. No changes have been made to the text, except that the spelling has been made uniform (urbanisation, industrialisation, labour) in both the main text and the footnotes.

I dedicate this book to Anje, who has always shared my activities to our mutual enjoyment though without neglecting her own life to do so, to our children and children-in-law Mathijs, Xandra, Francine and Daniël, and to our grandchildren Koen, Voske, David, Mette, Zarah and Isis, who I can now take to the zoo more often.

Pim Kooij

Groningen/Wageningen, January 2010

[1] We did our very best to trace the copyright holders and inform them. Due to the many mergers among publishing houses, in one case it proved impossible to do so.

1

Urbanisation. What's in a name?[1]

Introduction

Urbanisation is a term which is frequently used in urban history, yet it is seldom defined. More often than not, its meaning has to be deduced from the context, Since it concerns an important basic concept in urban history, to which many theories have been attached, it initially seemed to me of use to assemble the definitions as applied in the urban historiography. An evaluation of the material would then produce the most appropriate definition which could, in turn, be propagated for further use. However, it soon became evident that most authors meant the same by this term, i.e. the numerical growth of towns and/or the related growth of urban population in general. Although there were some interesting varieties within that definition, they were too few in number to justify a continuation of the projected approach.

What did become obvious, however, was that the current definition of urbanisation is not fit for use within urban history. I shall now attempt to demonstrate why one cannot apply that definition in urban history.

Naturally, I shall then try to offer a workable alternative, followed by an investigation into whether, and how, this new concept of urbanisation can be put to use.

Urbanisation. A demographic concept

Since the appearance of the first major studies about urbanisation in the second half of the nineteenth century, of which the most important, as well as the most influential study is that of Adna F. Weber, the term urbanisation has primarily been associated with numbers of people.[2] One wrote about the migration of people from the countryside to the towns, about the rise of metropoles, that is to say, towns. with a large population, about the differences in the growth of population in the towns, and in the countryside, and so forth. This concept has become so common, that an explicit definition is usually no longer given. More recent works are also guilty of this. In the cases where a definition is not omitted, one usually refers to the one applied by Hope Tisdale Eldridge in 1942; 'Urbanization is a process of population concentration. It proceeds in two ways: the multiplications of points of concentration and the increase in size of individ-

[1] First published in H. Schmal (ed.) *Patterns of European since 1500* (Croom Helm: London 1981) 31-61. Translation by Dineke Prince-van Wijnen.

[2] A.F. Weber, *The growth of cities in the nineteenth century* (New York 1899).

ual concentrations'.[3] In this concept, towns are the result of urbanisation, causing Ms Eldridge to renounce rather vehemently the definitions in which that was excluded.

There are two classes of definition which are deemed unacceptable. The first regards urbanisation as a process of radiation whereby ideas and practices spread out from the urban center into surrounding areas. This is an objectionable definition because it makes the city the cause of urbanisation rather than the result or the product of urbanisation. The second class of definition is more objectionable than the first, and more peculiar. It defines urbanisation as the increase in intensity of problems or traits or characteristics that are essentially urban. Again we have the confusion of cause and effect .[4]

Although this article does not refer to any source, nor to other works, it is clear that the first attack is aimed at the 'Schlesinger-approach', and the second at a somewhat sociological approach of which L. Wirth was the principal proponent.[5] Schlesinger, and others with him, regarded the towns in the U.S.A. as the hearths of creativity and innovation containing a vast radiating power.[6] Well-known in this connection, is R.E. Turner's theory, that the pioneers of innovation and progress were primarily to be found in the urban 'melting pots' and not, as his namesake presumed, on 'the frontier'.[7] W. Diamond was the first of quite a number of historians who criticised this approach, and little by little, the concept of urbanisation that had evolved from it, disappeared from (urban) history.[8]

According to Louis Wirth, a distinct way of living developed in towns, and was characterised by a stronger interaction and frequency of social contacts, which as a result were rather superficial, than had been the case before. People no longer saw each other during the whole day, but came into contact with only a partial aspect of the other person, namely, as postman, as neighbour, etc. The resulting segmentation of social restraint produced, on the one hand, more freedom for the individual, but on the other hand, symptoms such as lawlessness. Wirth labeled this way of life in towns 'urbanism' and wished it to be interpreted solely in the specifically sociological sense. Some of the characteristics attributed by Wirth to 'urbanism' were subsequently dismissed as being irrelevant, or just not accurate, for instance by, among others, Gans.[9] That does not alter the fact that, research into the urban way of life and its diffusion, still occupies, especially in the field of sociology, an important place. At times, though the term urbanisa-

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[3] H.T. Eldridge, 'The process of urbanization', in *Social forces* (1942), repro in J.J. Spengler and O.D. Duncan (eds.) *Demographic analysis* (Glencoe Ill. 1956) 338-343.
[4] Eldridge, 'The process of urbanization', 338
[5] L. Wirth, 'Urbanism as a way of life', *The American journal of sociology* (1938)1-24.
[6] A.M. Schlesinger, *The rise of the city* (New York 1933).
[7] R.E. Turner, 'The industrial city and cultural change', in C.F. Ware (ed.) *The cultural approach to history* (New York, 1940) 228-242.
[8] W. Diamond, 'On the danger of an urban interpretation of history', in E.F. Goldman (ed.) *Historiograpy and urbanization* (Baltimore 1941).
[9] H. Gans, 'Urbanism and suburbanism as ways of life', in A. Rose (ed.) *Human behavior and social processes* (Boston 1942).

tion is used instead of urbanism, which leads to confusion, and that ought to be avoided.

Eldridge, it must be admitted, did go to a lot of trouble to produce a definition so extensive that, so to speak, research can begin at zero point, that is, in periods and in places, characterised by a lack of towns. The aim, obviously, was to generalise, and to make it possible to go back in time to the cradle of mankind. As a result, the definition became somewhat vague, and that is not what we want. Fortunately, this misty veil has been lifted in the course of time. Thus, in 1965, Philip Hauser adopted the above-mentioned definition but added to it, 'As a result the proportion of the population living in urban places increases'.[10]

Although this then creates the problem of how to define precisely the word 'urban' - and Hauser devotes several pages to this - the introduction of the proportional relationship urban-rural population clarifies the situation and makes it more concrete. What are involved here, are facts that can be measured. Such a definition can be found either implicitly or explicitly among almost all the later authors. Quite recently, Bo Öhngren even suggested to label as urbanisation only those changes in the distribution of population that were to the benefits of towns. The real growth of towns, according to Öhngren, can better be qualified as 'urban growth'.[11]

In fact, these are really only variations of the same theme. More and more, urbanisation came to be regarded as a demographic process, and it has been defined as such almost exclusively in the last years.

Urbanisation. A macro concept which cannot be brought down to size

The demographic concept of urbanisation appeared to be quite usable in economic history, such as in dividing the upward trend of population into rural and urban growth, and in measuring the shifts within them. This process could then be functionally matched to other developments. Thus, links have been made between urbanisation and economic growth, and between urbanisation and industrialisation. Research into this usually involved the use of models and of statistics on a national level. Thus, figures concerning the distribution of population were related to figures concerning the growth of production or the growth of labour force in the secondary sector. Most interesting facts have come to light as a result of such an approach. At the Economic-Historical Conference held in Edinburgh, H. van Dijk stated that, in the Netherlands, the relative growth of urban population preceded industrialisation.[12]

When such a relation between urbanisation and industrialisation is established

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[10] Ph. Hauser, 'Urbanization: an overview', in Ph.M. Hauser and L.F. Schnore (eds.) *The study of urbanization* (New York 1965)1-47, 9.

[11] B. Ohngren, 'Urbanization and social change', in *Proceedings of the seventh international economic history congress* (Edinburgh 1978) 75-82, 75.

[12] H. van Dijk, 'Urbanization and social change in the Netherlands during the nineteenth century', in *Proceedings of the seventh international economic history congress* (Edinburgh 1978) 101-107, 101.

with the aid of aggregated facts on a national level, then the spatial element no longer plays a part in the analysis. The division into urban and rural population is numerical and not spatial. The absence of this spatial element is, in my opinion, a compelling and sufficient reason to place these studies among the 'normal' economic history, and not to consider them as urban history. I am, of course, quite aware of the fact that there is no consensus at all as to what urban history as a distinctive sub-discipline of economic and social history entails, or ought to entail, but, urban history without space seems to me urban history without towns. That is, unless one declares a town to be a state of mind or something like it; unfortunately, that does happen some times, as has been pointed out, for instance, in evaluations of the theory and practice of the urban history by Dyos and Kooij .[13]

At that same conference in Edinburgh, David Herlihy attempted to make a connection between urbanisation and industrialisation in separate towns. His conclusion was, that some towns, such as Naples in the 18th and Athens in the 19th century, underwent an extremely large increase in population without any form of industrialisation taking place.[14] Thus when pertaining to individual towns, such studies seem to have to be considered as 'urban history'. However, the concept urbanisation suddenly seems to be inapplicable. For, industrialisation can be examined at a local level, but urbanisation, by definition, cannot. The applied definition, which is based on a proportional distribution of the population, prevents this, so that the phenomena cannot be compared.

The current definition of urbanisation in social history is also quite suited for application, and that is not surprising considering the fact that historical demography constitutes an important sub-discipline of social history. Even then some immense problems arise. These manifest themselves once they leave the macro-level. Urbanisation can in no way functionally be connected to local social phenomena, neither can it be applied to research concerning small groups. As soon as the micro-sphere is given a central position, it becomes apparent that urbanisation forms a neutral category which can only function in the sense of: society urbanised, so something must also have happened in the individual towns.

The above-mentioned provides an explanation for the, in my opinion, somewhat disappointing course of the session about the relation between 'urbanisation and social change' at the conference in Edinburgh. The papers there were primarily concerned with social change in towns, with the result that urbanisation more or less was forced into the role of a peg on which to hang one's theory as it suited, but from which no interpretation whatever could be derived.

The papers did include some elements, nevertheless, which can be regarded

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[13] H.J. Dyos, 'Agenda for urban historians', in H.J. Dyos (ed.) *The study of urban history* (London 1968); P. Kooij, 'Stadsgeschiedenis en de verhouding stad-platteland', in *Economisch en sociaalhistorisch jaarboek* (Den Haag 1975) 134-141.

[14] D. Herlihy, 'Urbanization and social change', in *Proceedings of the seventh international economic history congress* (Edinburgh, 1978) 55-74, 59.

as positive ones within the framework of this theme. Bo Öhngren produced, as has already been referred to, an explicit definition of the concept urbanisation, while Henk van Dijk emphasised the phenomenon migration. The concept migration seems to me to be a good one within which it is possible to show a relation between urbanisation and social change. After the facts concerning the relative growth of towns have been subdivided into figures about groups of people who settle somewhere, who leave, or perhaps sojourn somewhere, a picture of the movement of people evolves which can, so to speak, be drawn on a map. As a result, the macro-concept of urbanisation not only obtains a pronounced spatial elaboration, but can, moreover, be related to social phenomena at a local level.

It seems to me, that this is the only way in which the demographic concept urbanisation can be fitted usefully into urban history. That is, of course, only in a very restricted sense. It has, moreover, proven to be extremely difficult to analyse social phenomena in the micro-sphere in such a way that the town is an active element, and not just the background scenery for a play. It is not without reason that the 'new urban history', an epithet given by Thernstrom to the more social and quantitative urban history, has been repeatedly stigmatised as social history within an urban framework.[15]

Urbanism, as defined by Wirth, quite obviously included spatial characteristics, since it was linked to density and separation in local settlement-patterns. This is not surprising, as the Chicago-school regarded the interaction between man and environment as the principal element in its research. However, it is not desirable that the micro-concepts are adjusted to the limited range of macro-concepts, with the result that, in the future, only the relation between urbanisation and urbanism will be examined. That would be putting the clock back, the 'new urban history' is currently undergoing a stormy development and pretends to want to enlarge her field rather extensively, particularly into the economic sphere. The volume *The New Urban History*, contains important promises to that extend, and they continue to be made good in, for instance, articles in the *Journal of Urban History*.[16] The spatial element is now receiving more attention in quantitative studies about the patterns of settlement such as have been presented in Peter Knights' work on Boston.[17] Such a wide range of urban developments needs a large macro-framework, and to that end, the concept urbanisation now in force is not suited at all.

The national past. No town in sight

A conception such as urbanisation which is insufficiently applicable, naturally ought to stimulate the search for an alternative macro-framework for urban history. Unfortunately, this does not seem to exist in urban historiography. The researcher has more often than not shut himself up in his own town and looked

[15] S. Thernstrom, Reflections on the new urban history, *Daedalus* (1971) 359-375.
[16] L.F. Schnore (ed.), *The new urban history* (Princeton 1975).
[17] P.R. Knights, *The plain people of Boston 1830-1860* (New York 1971).

no further than the top of the town wall. When an exception is made, it is usually an attempt to compare local developments to those on a national level. An example of this, for instance, is the connection made between the economic development of Manchester and that of England. Similarly, a study concerning the rise of socialism in the Hague was placed next to a study concerning the rise of socialism in the Netherlands. In such instance, problems occur that are identical to the ones mentioned in the preceding paragraphs. It appears to be impossible to connect national and local developments in such a way that an interaction can be traced. A parallel in the descriptions is the nearest that has been achieved.

The primary reason for this is, that the current picture of the social-economic past of a country is hardly regionally differentiated. There are facts about, and studies have been made of, economic growth, the growth of production, of population, of trade unions, and of the development of transport, and so forth. In these studies, especially when they are of a quantitative nature, the nation as a whole represents a statistical rather than a spatial unity. One can only then determine the contribution of the individual towns to these macro-processes if these towns are regarded as statistic entities. Even then, it will be of partial success. The statistics are often only available on a national, and not on a local level. In the Netherlands, for instance, it is impossible to determine the G.D.P. of a town for the 19th century, and also later. One is able to measure the contribution of individual towns to the increase in the national population, but it is impossible to subdivide the economic growth of a nation into urban growth.

Apart from the limited availability of source material, there is another fundamental difficulty. The attempt to adjust micro-studies to those existing on macro-level would result in a minimalising of the spatial element. This would mean a complete loss of identity for urban history. It is, of course, necessary to study those elements, but urban history deserves a more spatial approach. The rather hybrid nature of the subject, within whose framework the national past serves as a neutral reference, ought really to disappear. For, it leads, at the most, to studies in the sense of 'There was an industrial revolution in England, so something probably also happened in London'. Research titled, for instance, as, Middletown and the Industrial Revolution, ought by now to be substituted by studies named Middletown in the Industrial Revolution. It is not the micro-framework that needs to be adjusted, but the macro-framework. Progress within urban history will be stimulated in particular by a picture of the national past which is spatially constructed. The answer, in my opinion, is to re-examine the current concept of urbanisation.

The ecological complex. A framework that is too large

Upon examining the publications on urban history, one discovers that, since many years there is a slight dissatisfaction with regard to the concept urbanisation. Particularly in the 1960's, several studies appeared in whose title one frequently finds the term 'urbanisation'. Their observations purport many similari-

ties. One could call it an ecological-complex approach. The most important proponents of this approach within urban history were Eric Lampard and Leo Schnore. Characteristic is the following passage:

> At stake in a broader view of urban history is the possibility of making the societal process of urbanisation central to the study of social change. Efforts should be made to conceptualise urbanisation in ways that actually represent social change. For this purpose urbanisation may be regarded as a process of population concentration that results in an increase in the number and size of cities (points of concentration) and social change as an incremental or arhythmic alteration in the routines and sequences of everyday life in human communities. The method will be to explore possible interrelationships between the phenomenon of population concentration and certain apparent trends in social organisation, structure. and behavior.[18]

At first glimpse, it seems as if the well-known Eldridge definition has been quoted, but Lampard claims to be able to isolate urbanisation from the too limited demographic context by relating it to environment, technology and 'social organisation', This quartet together forms the ecological complex.[19] It roughly entails that increasing populations adjust themselves to the circumstances, specifically speaking, to environment, by way of technology and social organisation. The establishment of towns is one of these adjustments. At times it seems that Lampard labels as urbanisation this very process of adjustment, that is, the origin of towns and their growth in the widest sense. In the end, he adheres to a demographic concept.

> The demographic concept of urbanization, in short, is not as constricting as it first might have appeared; its scope allows inquiry into many facets of social change, and its root in population preserves a vital interest in the attributes and conditions of human beings living in organized communities.[20]

However, it was that very relating to other matters that was more difficult than presumed. One is here concerned with gigantic variables which are barely manageable and difficult to quantify. The element population appears to be the easiest to quantify with the result that it is the most frequent object of research. An absolute highlight was obtained in the shape of Lampard' s article 'The Urbanizing World', in which all the aspects of population development, which fit into the framework of the ecological complex, have been rubricated in a useful and

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[18] E. Lampard, 'Urbanization and social change', in O. Handlin and J. Burchard (eds.) *The historian and the city* (Cambridge Mass. 1963) 225-248, 223.
[19] E. Lampard, 'Historical aspects of urbanization', in Ph. H. Hauser and L.F. Schnore (eds.) *The study of urbanization* (New York, London, Sydney 1965) 519-554.
[20] Lampard, 'Historical aspects of urbanization', 522

well-considered manner, and brought into relation to each other.[21] Nevertheless, even then, it only foreshadows the connection to other variables in the ecological complex. A real relation has not been brought about. Even if this should ever succeed, the circumstance that the different elements are so comprehensive, probably results at the most in a sort of history of society in which room is also made for towns, and that is not what urban history is waiting for.

Leo Schnore still has great expectations of the ecological complex, particularly in the micro-sphere.[22] Perhaps he is right; for, after all, it contains the element space. Several important studies have been made concerning the spatial distribution of the urban population. The question remains, however, whether they ought to be made within the framework of the ecological complex. Environment is rather deterministic, and that is no longer easy to prove in modern times. Studies such as by Knights and Warner have, in any case, proven that these things ought to be examined more pragmatically.[23]

Town systems. A spatial form of urbanisation

It must be admitted, though, that the ecological complex does contain, apart from much unnecessary ballast, material fit for a new concept of urbanisation. It is to Eric Lampard's merit that he produced these elements and introduced them emphatically in urban history.[24] For it was he, who identified the concentration of a large number of functions in a central area such as towns, as one of the characteristics of the rational adjustment of man to his environment. These towns became a centre of production, of transport, of services, of politics and of culture, etc. They fulfilled this central role not only for the inhabitants, but also to the surrounding, mostly agricultural, areas. Moreover, the towns became more and more interwoven in all kinds of ways, because, for instance, there was an exchange of goods, or perhaps, because a flow of migration evolved. A whole network, or system of towns, evolved, which primarily could be determined horizontally. Besides that, however, there was the phenomenon that some towns acquired more, and sometimes more important, central functions than others. That lead to hierarchical characteristics within the system of towns. Lampard c.s. assembled these into a type of pyramid structure, but it is also possible to present them horizontally, which I hope to do further on.

A similar view was also evident, quite early on, in the work of Oscar Handlin. In the article, 'The modern city as a field of historical study', he states that the modern town has developed from an organism into an organ.[25] From an in-

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[21] E. Lampard, 'The urbanizing world', in J. Dyos and M. Wolff (eds.) *The victorian city* (London 1973) 3-58.
[22] L.F. Schnore, 'Urban history and the social sciences: An uneasy marriage', *Journal of urban history* (1975) 395-409.
[23] S.B. Warner jr., Streetcar *suburbs, The process of growth in Boston, 1870-1900* (Cambridge Mass., 1962).
[24] E. Lampard, 'The history of cities in the economically advanced areas', in *Economic development and cultural change* (l954/55) 81-137.
[25] O. Handlin, 'The modern city as a field of historical study', in O. Handlin and J. Burchard (eds.) *The historian and the city* (Cambridge Mass. 1963) 1-26.

dependent entity, often even quite tangibly divided - either due to water or to walls - from her surroundings, the town developed in the course of time more and more as a part of a larger entity. What one ought to envision by that was not exactly described; Handlin primarily touched on the mutual political and economic dependence of towns, but even then the description remains a stimulating one. The transformation from organism to organ was accomplished by three developments, according to Handlin: the rise of centralised national states, the transformation of the economy from a traditional household, to a capital-using basis and the 'technological destruction of distance'. Although this has not been elaborated on further, one may make two important conclusions about this theory. Firstly, that the contributing forces belong to different spheres - in this case, the economic and the political - and, secondly, that the creation and development of town systems must be brought back to the pre-industrial era. In a subsequent paragraph it will be demonstrated that the first forms an obstruction to the shaping of a new concept of urbanisation, while the second seems to be confirmed by practical research.

Whilst Handlin's view on town systems remains somewhat vague, that of Lampard is embedded with great difficulty in that burdensome ecological complex. Nevertheless, the introduction of the concept of town networks within urban history proved to be a very important development. Thus, it became possible to remove towns from their isolation and to examine them within a useful framework. The realisation, that the town constitutes a part of a larger framework, and that it is attached to it in all sorts of ways, should prevent the urban historian from pronouncing his own town as the pivot of the world commanding an eternal myopic fascination.

Theoretical concepts such as nodality, centrality and hierarchy, are suited for use within urban history. For the first time, a framework is within reach that includes a spatial dimension and, since urban history always primarily regarded the individual towns as spatial units, it is, at last, possible to study the micro- and macro-level with regard to their mutual interaction.

Such an important framework deserves an important name. It seems to me desirable that the concept urbanisation receives a broader definition, which also contains the above-mentioned processes. This can be done simply by defining urbanisation not only as the concentration of people at central points, and their distribution throughout the nation, but also as the concentration of activities at central points and their distribution throughout the nation. In this sense, towns need to be seen as multifunctional central points, as a point where people, goods, services, power and impetus are concentrated. As for the concentration of activities, they include not only those of an economic and social nature, but also the political and the cultural. The dosage of the various activities over the towns in a nation produces absolute, as well as relatively, large, differences which increase the more the towns become interdependent. This is expressed by the differences in the central functions, and the shifts within these functions. This mutual de-

pendence can, for the most part, quite manifestly be spatially determined, even in the past. Thus, one could determine quite early on the flow of goods from one town to another, the migration of people, and the exchange of correspondence, whilst that same mutual dependence was given an added emphasis by (water)ways, railways, and, later on, by high tension masts and telephone cables.

By introducing a definition of urbanisation which is based on the presence of central functions and the development of dependency-relations, urban history benefits more than when one clings to a sterile, and solely demographic concept of urbanisation. The concentration of people and of activities are a logical extension of each other; there is a quite obvious interaction. In research that has been done up until now, one can observe repeatedly, that the consolidation of activities in a central point always occurred in interrelation to the numeric growth of towns. This cannot be contradicted by the assertion that, in some towns a large increase in population preceded industrialisation. In those cases, the central functions were to be found in other spheres, varying from the political function as national capital, to the cultural function as a 'magical centre'. Moreover, the definition I suggested, bypasses the difficulty encountered by Hope Tisdale Eldridge, and which prevented her from producing a wider concept of urbanisation, that is to say, that in that event, one could distinguish towns before urbanisation had actually taken place.

Of course objections can be made to the new definition. The most important one, it seems to me, could be that it is still difficult to provide a precisely outlined content for the concepts activities and central functions. By activities is meant in the first place, of course, production, consumption, and services. However, it also includes activities such as exerting political power, creating new standards and values, and accepting innovations. Practical research should throw more light on this; but, obviously, this research into the way in which, and to what extent, towns form a part of a larger entity, is only possible after introducing a new concept of urbanisation. As for the concepts centrality and hierarchy, it must be noted that they have already been well-tested and deemed applicable in another, pre-eminently spatial, discipline, namely, geography.

Geographic concepts. A too rigid regularity

One will not find the stone of wisdom in the field of geography, either. There are no theories on town systems at hand that can be applied directly to urban history. The only concept which up until now has somewhat found its way into urban history is that of Walter Christaller. In 1933, he created the concept central place.[26] In the course of time, certain towns have acquired a central service function with regard to the smaller towns and villages. In a spatial dimension, these small nucleï are situated at an equal distance from the service-centers so that they form corners, so to speak, of a hexagon of which that central town is

[26] W. Christaller, *Die zentralen Orte in Süddeutschland* (Jena 1933).

the pivot. This same pivot can, in turn, be regarded as a corner of a hexagon around a more important service-centre, thus creating a hierarchy of central points in a horizontal pattern.

Naturally, such a pronounced theory resulted into much discussion among geographers. Although Christaller's theory is, in general, no longer accepted, the concepts centrality and hierarchy have not really been meddled with; in fact, they are still often applied. Of the various criticisms of this theory, the following aspects in particular are relevant to urban history,

a) Empirical research has never really produced regular hexagons. The regularity-aspect in particular has turned the theory into a sort of Procrustean bed into which reality will only then fit after having undergone far-reaching mutilation. Also to be mentioned in this context, is Jefferson's 'law of the primate city'. Jefferson stated that, in each country, a capital city evolves, which attracts so many central functions that, with regard to growth and inhabitants, it by far outdoes the nearest ranking towns.[27] I need not to travel far to find evidence to the contrary. In the Netherlands, the three towns Amsterdam, the Hague and Rotterdam have been much the same in size since the 19th century, and this can also be said of the Belgian towns of Antwerp and Brussels. Not very convincing is Jefferson's argument that the three Dutch towns are situated so near to each other that they are to be regarded as one large town, nor that Antwerp and Brussels must be seen as exponents of, respectively, Flemish and Wallonian Belgium; this is especially unconvincing when one looks back into history. In any case, regularity is something which a historian will never accept in advance; if he does, it will only be after thorough research.

b) Christaller employed an institutional method of regulation. He began with institutions such as schools, markets, hospitals, and so forth, and on the strength of that, produced a honeycomb structure of primary towns. This approach meant that emphasis was laid on the services, and that industry was neglected. In this way, a new industrial town, which fabricated products for a national and an international market, and, therefore, made an important contribution to the gross national product, could obtain a very low score. This result was then accentuated even more by the fact that such industrial towns were very often situated near each other, so that they had to share the various central functions.

The emphasis on regularity disappeared from subsequent theories, and an at tempt was made, often with success, to shift the accent from services to industry. An evaluation of these theories on town systems is not necessary at this point; let me suffice by referring to such competent studies as those by Berry, Buursink, Hoekveld, Pred and Robson.[28] Research in the field of geography, however, has

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[27] M. Jefferson, 'The law of the primate city', *Geographical review* (1939) 226-233.

[28] B.J.L. Berry, *Growth centers in the American urban system* (Cambridge, 1973); J. Buursink, *Centraliteit en hiërarchie* (Assen 1971); G. Hoekveld,Theoretische aanzetten ten behoeve van het samenstellen van maatschappijhistorische modellen van de verhouding van stad en platteland in de nieuwe geschiedenis van Noordwest-Europa, in: *Economisch en sociaalhistorisch Jaarboek* (Den Haag 1975) 1-48; A.R. Pred, *The spatial dymanics of U.S. urban-industrial growth 1800-1914* (Cambridge Mass. 1966); B.T. Robson, *Urban growth, an approach* (London 1973).

progressed so far now, that today's USA and most West European countries have been subdivided into regional service-centers which sometimes, but not always, display hierarchical characteristics. These classifications are based on the number of inhabitants of the towns and the functions these towns occupy in the economic sphere whereby an important criterion was usually the presence of institutions in the services sector. This is quite easy to measure, but attempts have also been made to weigh other economic activities.[29] These classifications of towns are made with the aid of refined techniques and re possible thanks to the enormous amount of data which is available for the present.

Such an approach cannot be applied just like that to the past. Much data which is available concerning the present will be searched for in vain with regard to the past; similarly, data concerning the past cannot always be applied to the present. Moreover, it is quite the question whether one ought to apply this method to the past without making some adjustments to it. One of the primary criteria is the range of the service capacity of a town. This quite obviously depends on the available transportation and communication facilities, and these varied for each historical period. Similarly, the factors determining the establishment of industry differed as time passed.

When one looks into town systems, its extension, and the changes within them - and that is, in my opinion, that with which urban history should primarily be concerned with at a macro level - then, the current divisions and criteria can be applied only in part. That is why I am not so certain that urban history benefits from an approach as was recently presented by Sam Bass Warner and Sylvia Fleisch.[30] They advocate the introduction in historical research of an accounting system drafted by the Bureau of Economic Analysis in co-operation with geographers. This system divides the U.S. towns into Standard Metropolitan Statistical Areas (SMSA). These SMSA's correlate to the service sectors around primary towns and have been shaped with the aid of statistics compiled from the census of 1960. Since this division uses as its point of departure the county of which long series of figures are available, Warner and Fleisch consider its application to the past of use, because, by retaining the same divisions throughout time, all sorts of quantitative comparisons become possible. However, maintaining this very SMSA throughout time will produce a distorted picture. It just is not possible to deduce the past linea recta from the present. Moreover, the present is sometimes completely different from what the past seemed to lead to. In any case, urban historians cannot accept a priori that the network of towns in 1960 corresponded to that of a century earlier, even though it may seem to be so. In point of fact, the authors recognise this, but as far as studying problems within the range of social history is concerned, they see the objection as something that can be overcome. Moreover, they point to the fact that research into town systems in the past still has to commence, so, there is no alter-

[29] e.g. G. Alexandersson, *The industrial structure of American cities* (Stockholm 1956).
[30] S.B. Warner jr. and S. Fleisch, *Measurements for social history* (London 1977).

native method.

There are, indeed, hardly any extensive studies about town networks in the past, and of the few that exist, most concern the pre-industrial period and/or specific countries such as Russia and China. As far as the industrialised society is concerned, it was Eric Lampard once more who emerged as the pioneer. In the article 'The evolving system of cities in the united States', the period after 1800 was thoroughly examined.[31] In it, by the way, he adhered to the demographic definition of urbanisation, and that proved to be, as he himself admits in his concluding sentence, an obstacle to a further examination of the material. Important relevant passages can also be found in Pred's work, which is more concerned with the general spatial aspects of urban-industrial growth in the U.S.A. in the period 1800-1914. After that, research at a national level was hardly pursued. There is, however, the important study of Michael Conzen about the role of transportation in the town network.[32]

Further important research has been done into the spatial diffusion of innovations. These, as well, have been initiated by geographers, of which the pioneer was Hagerstrand.[33] Due to their nature, these studies could not become anything but historical studies, since the acceptance of innovations has to involve time. Not only did they look into the diffusion of artefacts such as the steam engine, the automobile and the telephone, but also of matters in a more institutional sphere. Thus, Hagerstrand examined the diffusion of the Rotary, and Pred that of information.[34] These studies showed that innovations often tend to diffuse in a hierarchical way. and that, at the same time, the factor distance was of crucial importance. Not only did diffusion occur towards central points at a lower level, but also to the immediate surrounding area. A representative study in this connection, is that of Brian Robson into the diffusion of gasfactories, telephone and building societies.[35] It was there obviously a matter of ranking order (number of inhabitants) and at the same time of the distance between primary towns and dependent towns. With this, this study indicates that knowledge concerning the diffusion-pattern of innovation can be an important aid in reconstructing town systems.

Although expressions such as central points or hierarchy are not at all employed in F.J. Fisher's article 'London as an engine of economic growth', this work deserves to be mentioned, as it sketches rather evokingly how London acquired an indisputable position in the 18th century at the top of the English town pyramid, with the result that there was a strong numeric increase in popu-

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[31] E. Lampard, 'The evolving system of cities in the United States', in H.S. Perloff and L. Wingo (eds.) *Issues in urban economics* (Baltimore 1968) 81-139.

[32] M.P. Conzen, 'A transportation interpretation of the growth of urban regions', *Journal of histcrical geography* (1975).

[33] T. Hagerstrand, *Innovation diffusion as a spatial process* (Chicago 1967).

[34] A.R. Pred, 'Large city interdependence and the pre-electronic diffusion of innovations in the United States', in L.F. Schnore (ed.) *The new urban history* (Princeton 1975) 51-75.

[35] B.T. Robson *Urban growth, an approach* (London 1973).

lation.[36] Another interesting aspect of this article is that it also includes the element political power, as exerted by London in order to get its own way. This political aspect can also be found in the pleasant study made by Johan de Vries about the economic rivalry between Amsterdam and Rotterdam where, in some sense, the top of the Dutch town-hierarchy was at issue.[37] That, then, is the only Dutch historical study concerning this subject, that exists of recent times. An important article not to be omitted was written some thirty years ago by the geographer H.J. Keuning about the town-hierarchy between the two World Wars.[38]

The formation of networks. A primarily economic happening

If we regard urbanisation as not only the concentration of activities in the socio-economic sphere, but also in the political and cultural spheres, complications arise. Since it is impossible to measure the importance of these spheres with respect to each other, more town systems ought to be constructed. Apart from an economic hierarchy, it is also possible to construct a political one, and they need in no way coincide.[39] The Netherlands itself provides a clear example of that, as political power has of old been exercised from the Hague. Under that come the capitals of the eleven provinces; the Hague occupies a double function, national as well as provincial capital, The two largest. and economically most important cities, Amsterdam and Rotterdam, do not appear at the top of the political network, being neither national nor provincial capitals.

As to the cultural sphere - and here I primarily think of patterns of standards and values. and the changes within them - one encounters matters that are often hardly to be measured. However. there are possibilities of measuring the spatial diffusion of cultural innovations. but then in a roundabout way, such as by analysing the contents of local newspapers or comparing police regulations. It is not unlikely that what will then become evident is that the frequency of cultural activities can be related functionally to the size of the town. (That is where we see Wirth's urbanism reappearing.) Such a conclusion is less probable in the political sphere as it is characterised by a hierarchy of rigid, venerable and often age-old institutions.

It is, of course, not very inspiring to have to work continually with several hierarchies which only partly overlap each other. For that reason, macro-research within urban history can best devote itself primarily to socio-economic

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[36] F.J. Fisher, 'London as an engine of economic growth', in J.S. Bromley and E.H. Kossmann (eds.) *Britain and the Netherlands*, vol. IV (The Hague 1971) 3-17.

[37] Joh. de Vries, *Amsterdam-Rotterdam, Rivaliteit in economisch-historisch perspectief* (Bussum 1965).

[38] H.J. Keuning, 'Proeve van een economische hiërarchie van de Nederlandse steden', *Tijdschrift voor Economische en Sociale Geografie* (1948) 566-582.

39 Even within the economical sphere. it is possible to create different systems, according to the criteria used for classification. These are, however, easy to bring into one line, as has been shown clearly by Brian Robson elsewhere in this volume.

activities that are concentrated in central points. This concentration of activities was the major driving force behind the increase in the labour market, which in turn largely caused the numeric growth of towns. Political activities can also be included, in so far as they can be translated into the number of jobs involved. Even a more outdated or materialistic interpretation of culture can be translated into the labour market and into artefacts, but that seems to me to be less desirable.

In any case, there do exist theories within the field of geography, which can function as a guide for research into the spatial diffusion of social and economic activities in the past. A pragmatical approach, in which the outlines of the spatial system have not been determined in advance, is possible only if an ample amount of sources of sufficient quality is available. In my opinion and considering the results that have been achieved, there are enough possibilities to reconstruct the spatial diffusion of people, goods, services and information with the aid of archives. Some of these possibilities will be mentioned in the next paragraph. In doing that, I shall not again cross boundaries, but, in order to achieve a reasonable unity of time and place, I shall limit myself to the Netherlands, and to the turn of this century, the period within which the industrial revolution began. In doing this, I shall elaborate on an example which was not entirely an arbitrary choice.

A town system for the Netherlands. A glimpse

The most manifest characteristic of town systems comes in the shape of the communications between them. Most useful observations about the presence and the development of town systems were recorded by Jan de Vries (1978) in his study concerning the development of a network of (tow-)barges in the pre-industrial period.[40] This can also be done with regard to the industrial period. Railroads, overland routes and waterways were the channels along which goods were transported from one town to another. The quantity and the nature of these goods are, alas, usually no longer to be traced, even though there are sources available. For instance, the Staats Spoorwegen (National Railways), for many years published in their annual report the volume of goods that was transported from one town to another. However, this was not subdivided into the nature of the goods. The figures available concerning tolls and clearances of goods are usually not very reliable. Nevertheless the course of the connecting routes, the frequency of various types of regular and carrier services, information about the number of passengers carried, and such, do present us with operational indications concerning the nature of the system.

The nature and the volume of the flow of people between towns can be reconstructed with precision. A hypothesis worth putting to the test, is, that these

[40] Jan de Vries, 'Barges and capitalism, Passenger transportation in the Dutch economy 1632-1839', *A.A.G. Bijdragen no. 21* (Wageningen 1978) 33-398.

flows of people moved particularly in the direction of those centres where the flow of the most goods originated. This migration can be measured with the aid of registrations concerning settlement and departure, which were made by each town. After comparing this information with the town registers, one can classify these migrants according to age, profession, place of origin, size of family, etc. Unfortunately, this type of research has only been done for a few towns, so that there is no prospect at all yet of a national picture subdivided into towns.[41]

The spatial diffusion of innovations with regard to the Netherlands, has barely been subject of investigation. A first attempt was the research into, among other things, the diffusion of bicycles and electric services.[42] The diffusion of the first (electric) power stations, though, offers a picture which is somewhat difficult to interpret (Table 1.1).

If one tries, one can discover the hierarchical aspect (though Bloemendaal, for instance, preceded Haarlem, but less that of proximity. Political motives were often at stake. In large towns, the local authorities often checked private initiative whilst they themselves wished to establish a power station at a later date. In small towns, the rich inhabitants, or the large industries, frequently forced the town council to approve the establishment of a private owned power plant. It is, furthermore, of interest that the diffusion of this innovation not so much emanated from the top of the town hierarchy, but more from the towns that were comparable either as to the number of inhabitants, or as to their social or political structure. For instance, when the debate concerning the introduction of electricity began in Groningen, one turned to Den Haag and Nijmegen for advice, not to Rotterdam and Amsterdam. As Pred indicated, this possibility of a horizontal diffusion is missing in most diffusion models.[43] The top of the pyramid of towns is usually the only link between regional subsystems. Horizontal diffusion occurred in more areas. Thus, the twentieth century saw the development of chains of department stores - also an innovation -, which were confined to comparable towns such as Groningen-Arnhem-Nijmegen; although the locations Groningen-Amsterdam also occurred.

Concentration numbers

Much of the research done by geographers concerning the present, can, without much difficulty also be done for the past. The relatively easiest approach is the much-applied method of institutional regularity, based on the presence of institutions of the third sector.

There are, however, other approaches in existence as well which concentrate more on industry. These then seem more dynamic and indicate more rapidly the

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[41] H. de Vries, *Landbouw en bevolking in Friesland tijdens de agrarische depressie* (Wageningen 1971); H. van Dijk, *Rotterdam 1810-1880* (Rotterdam 1976).
[42] H. Baudet, J.W. Drukker, P. Kooij, H. van der Meulen, S. de Vries, W.G. Whitney, *Innovation and consumer demand* (Groningen 1974).
[43] Pred, *Large city interdependence* (1975).

Table 1.1 The establishment of electric power stations in the Netherlands 1886-1910.

	Private	Municipal
1886	Kinderdijk	Nijmegen
1889	Den Haag	
1892	Amsterdam	
1895	Borne	Rotterdam
1898	Elst, Baarn, Terborg, Beek-Ubbergen	
1899	Boxtel, Hilversum, Naarden, Bloemendaal, Abcoude, Maarssen	
1900	Driebergen, Hengelo, Valkenburg, Watergraafsmeer	
1901	IJmuiden, Rijswijk, Terneuzen, Enschede, Veendam, Haaksbergen, Almelo	
1902	Rhenen	Groningen, Haarlem, Heerlen
1903	Voorburg	Soest
1904	Ginneken, Scheveningen	Amsterdam
1905		Utrecht
1906	De Bilt, Blaricum, Helpman (Groningen)	Den Haag
1907	Monster, Nunspeet, Wassenaar	Arnhem, Leiden, Naaldwijk
1908	Raamsdonk	Delfzijl, Nijmegen
1909	Aalsmeer, Ulft	
1910	Breskens, Cuyk, Eindhoven, Helmond, Kimswerd, Middelstum, Oosterwolde, Vlissingen	Delft, Dordrecht, Gouda

changes that occur within the system. One of these is the rather old, but still applied method of concentration numbers.[44] A concentration number is:

$$\frac{\textit{The proportion of the national labour force per category living in a town}}{\textit{The proportion of the total population living in a town}} \quad x\ 100$$

High concentration numbers, therefore, show that a certain category is overrepresented, while low ones refer to an underrepresentation. One need not in this case regard the number 100 as an absolute turning-point, since some economic activities without doubt take place primarily in towns, and others in rural areas.

[44] L. van Vuuren, *Rapport betreffende een onderzoek naar de sociaal-economische structuur van een gebied in de provincie Utrecht* (Utrecht 1938).

The concentration numbers indicate, in the first place, regional specialisation. They show to what extent, and for which goods and services a town depends on other towns, and to what extent some towns in turn supply others. Moreover, the height of the concentration numbers give some indication of the volume of the flow of goods from, and to, certain towns. That then, introduces the hierarchical element into the picture, especially when the nominal figures are taken into consideration. The direction of the flow of goods can, theoretically, also be determined with the aid of the concentration numbers if one assumes that the goods flow from towns with high scores to those with low ones in a certain category, whereby an attempt is made to limit the distance as much as possible. This, of course, should be examined with the aid of more concrete data; at the same time, attention should be paid also to the double role of the large ports, for they also provide connections with other national systems.

The concentration numbers have been calculated for these 20 Dutch towns which, according to the census of 1889 had the most inhabitants, and also for the top 20 of 1909. The source of information is the census of the labour force held in 1889 and 1909 (see for the national totals Table 1.2).

The division into categories in the census of 1889 showed some disparity with that of 1909. This difference has been wiped out by joining together three categories of trade, and by dividing the category illumination into chemical production and the fabrication of gas. The numbering of the categories corresponds to that of 1909. It must be noted, though, that the figures are only partially comparable since in 1889 the profession was that one was concerned with, while in 1909, it was the place where one worked. According to the calculations made by J.A. de Jonge, 8,16 and 22,23 in particular cannot be compared.[45] As far as 16 is concerned, this has been set right.

For most of the above-mentioned categories, the concentration numbers have been determined.[46] Some have been omitted, either because there were too few labourers concerned, or because they included professions that were too dissimilar.

Furthermore the diamond-cutting profession occurred, apart from in Amsterdam, only in Hilversum, so that it seemed of little use to include it in the comparison (see Table 1.3 and 1.4).

A further complication is the fact that the results for 1909 include the complete information pertaining to only the 10 largest towns. For the other towns, only the most important professions were mentioned. Consequently, the concentration numbers for Dordrecht, Maastricht etc. are relatively too low and sometimes are not even mentioned. A comparison between the complete and the incomplete figures for the 10 largest towns revealed that there are rather large discrepancies in 5, 6, 16, 17, 28 and 29-32. Either none, or practically no

[45] J.A. de Jonge, *De industrialisatie in Nederland tussen 1850 en 1914* (Amsterdam 1968), 457.

[46] Theun Dankert's expertise in determining the concentration numbers was of great assistance to me, while Piet Pellenbarg offered useful advice as to how I could apply them. I am grateful to them both for this.

discrepancies were found in 11-13, 18-19, 27.

Unmistakeably high concentration numbers are naturally not very revealing when they concern a small labour force. Thus, the. impression is given that Leeuwarden was an important centre of the paper-manufacturing industry, and

Table 1.2 The Dutch labour force, divided into categories, 1839 and 1909

	Category	1889	1909
1	Pottery, glass, lime, stone	18,080	27,907
2	Diamond cutting etc.	10,447	9,709
3	Printing	12,105	17,955
4	Building activities	120,975	174,877
5	Chemical products, candles, oil, wax	3,751	11,558
6	Wood-, cork-, straw-industries	37,387	48,529
7	Clothing, laundry	75,645	105,839
8	Arts and crafts	1,598	2,377
9	Leather, oil-cloth, caoutchouc	37,422	36,939
10	Bog-ore, coal, peat	15,371	22,174
11	Metal-industries	41,633	47,677
12	Steam- and other machines	6,456	58,176
13	Shipping, coach-works	13,516	26,006
14	Paper-mills	2,923	10,075
15	Textiles	44,455	57,054
16	Gas, electricity works	2,490	4,771
17	Food and luxuries	84,327	120,759
18	Agriculture	524,624	616,395
19	Fisheries, chase	16,650	23,182
20	Trade	135,669	185,357
21	Transport	131,255	216,603
22	Banking	708	3,506
23	Insurance	1,098	4,104
24	Professions such as doctors, artists, authors, accountants	30,015	65,221
25	Private education	9,655	19,199
26	Nursing, caring for the poor etc.	3,782	14,969
27	Domestic service	166,495	222,562
28	Free labour	25,164	22,744
29	Civil service	34,436	36,747
30	Provincial civil service	886	494
31	Local service	25,299	36,529
32	Polder-board	2,604	1,545
33	Church officials	12,208	10,088
	Total labour force (1-33)	1,652,729	2,261,590

Figure 1.1. The largest towns in the Netherlands, 1909 and labour force categories in which they are strongly over- and underrepresented.[47]

[47] These figures following the name of a town that are preceded by a + sign refer to the categories that are strongly overrepresented in that town. The strongly underrepresented categories are indicated by the - sign. The situation refers to 1909, as it gives a clearer picture than that of 1889. If a certain category already showed a high or low concentration number in 1889, this is indicated by underlining the figure. One of the things that emerges, is, that towns which had specialized themselves in a certain sector and, therefore, showed a high concentration number in a certain category and relatively low in many others (for instance Schiedam, Den Helder, Apeldoorn, Enschede and Hilversum) had more chance to rise or fall in rank than towns which showed a more balanced pattern. This picture confirms the observations made by Brian Robson elsewhere in this volume.

Schiedam of the chemical industry (see Figure 1.1). In reality, there was, respectively, one strawboard factory, and one candle factory. Similarly, the high concentration number for the banking business in Amsterdam is of no significance.

It is quite another thing when large categories such as the textile industry and trade are at issue. The high concentration numbers for Tilburg and Enschede confirm that these towns, followed at some distance by Leiden, supplied the greater part of the national production of textiles. Moreover, Tilburg and Enschede are both prime examples of new industrial towns, as reflected in the relatively low-scoring services category, and, as can be expected with factory-workers, few domestic services. These types of towns exported, as well as imported, many goods.

Other towns show a more stable build-up. This was, for instance, notable in the case of Amsterdam and Rotterdam. That trade was the primary function of these towns is, indeed, reflected in the concentration numbers. This is also the case with Groningen and Leeuwarden. Quite remarkable is the low figure noted for Schiedam; the proximity of Rotterdam is guilty to that. Then, especially if one takes into account that figures concerning the third category are incomplete, there is an unmistakable rise in the services-function of Apeldoorn.

As far as Amsterdam and Rotterdam are concerned the concentration numbers do show that the industrialisation in the Netherlands is to be attributed largely to the balanced growth of the industrial sector in these towns. The figures also reflect the transformation of the old trading centre, Dordrecht, and the agricultural centre, Delft, into industrial centres.

It is, by the way, not easy to distinguish, with the help of these concentration numbers, the peculiarly residential towns. Den Haag and Arnhem, which to us are known, thanks to other source-material, as offering attractive living-surroundings for the upper social classes, both had high concentrations of domestic services. This can also be said of Hilversum, where, in this period, many well-to-do citizens of Amsterdam took up residence, but not of the rapidly growing residential town of Apeldoorn.

The numbers seem to me of particular use when we examine the highest and lowest concentrations within a specific category. They give an indication as to the goods that left the towns and those that entered the towns. That also goes for the rendering or receiving of services. The high standard deviation in the category pottery confirms that production was primarily restricted to Maastricht. A comparison of the standards per category throughout time, may reveal that the concentrations dropped only to increase in other towns. This indicates a regional specialisation. In the period 1889-1909, this is evident of, for instance, category 9, the shoe-industry, which was transferred to some towns in Brabant. Similarly, the rise of Groningen as a national clothing-centre, became apparent very gradually in the same period. The divisions in category 29-32 reveal less in this connection, since most of the labour force here represents the military.

The longer the series of concentration numbers become, the more conclu-

sions can be made. Unfortunately, the few labour censuses that were held before 1889 are not very reliable. Perhaps of good use are the figures concerning license fees that have been preserved by many towns. Information about professions can also be found in nineteenth century registries.

Such series constitute only one brick in the reconstruction of a town system. In this case, they represent merely an example, and hopefully, can be related to facts and approaches which have been produced elsewhere. Combined together, it ought to yield, in the end, a picture of urbanisation in which not only people, but also towns occupy a central place.

Table 1.3. Concentration numbers of the largest Dutch towns, 1889

	inhabitants	1. Pottery	3. Print	4. Building	5. Chemical	6. Wood	7. Clothing	9. Leather	11-13. Metal	14. Paper	15.Text	16. Gas	17. Food	18-19. Agricult.	20. Trade	21. Transport	22-23. Bank	27. Dom	28. Free	29-32. Civil
1. Amsterdam	408061	35	249	127	123	101	163	86	138	45	0:00	94	117	1	185	183	279	165	162	110
2. Rotterdam	201858	41	198	130	87	133	216	92	150	89	28	204	142	2	189	221	208	138	194	90
3. Den Haag	156809	39	283	165	54	127	171	100	121	25	15	269	86	13	132	97	213	203	67	222
4. Utrecht	84346	88	255	147	137	96	178	102	183	16	14	256	130	11	137	123	234	150	301	199
5. Groningen	56038	60	298	122	116	144	155	94	97	22	49	262	132	8	185	152	205	165	235	126
6. Haarlem	50500	43	426	166	143	63	166	101	227	12	52	187	105	12	152	100	203	173	248	127
7. Arnhem	49727	115	234	157	49	102	186	119	105	99	40	281	101	18	133	117	226	193	67	202
8. Leiden	43379	55	336	124	123	135	200	126	130	14	405	200	122	6	142	123	150	147	91	202
9. Tilburg	33905	21	77	108	42	72	176	199	190	23	1415	75	103	28	74	77	192	75	29	21
10. Dordrecht	32622	89	187	141	203	178	156	107	256	47	21	222	159	6	158	191	337	153	51	112
11. Nijmegen	32101	105	248	136	115	104	121	113	84	87	7	316	119	35	105	104	265	151	77	162
12. Maastricht	32078	2376	115	51	75	157	181	162	173	1944	33	68	152	7	115	90	148	129	31	182
13. Leeuwarden	30433	92	252	118	163	107	199	104	132	669	23	167	108	16	199	125	246	177	240	248
14. Delft	28458	92	102	127	774	126	150	140	271	38	9	191	170	10	144	103	105	109	200	153
15. Den Bosch	27138	86	457	104	52	104	191	241	331	17	53	280	216	7	146	127	166	146	0	233
16. Zwolle	26384	30	230	134	256	200	141	111	289	41	41	254	107	20	145	172	256	153	10	117
17. Schiedam	25533	99	143	116	760	228	102	80	109	0	27	177	479	8	97	142	147	85	1	57
18. Deventer	22914	138	218	158	161	158	135	102	200	67	240	221	176	20	119	96	196	135	15	246
19. Den Helder	22221	3	81	112	36	42	59	94	166	7	26	114	63	19	111	143	22	72	62	804
20. Breda	22176	41	208	112	603	101	186	157	189	70	49	172	145	8	118	111	270	166	12	410
Apeldoorn	19275	18	66	103	64	107	110	61	62	2570	12	47	74	115	52	61	104	117	4	54
Enschede	15229	10	78	117	40	23	100	75	102	111	2286	131	6	9	87	66	180	66	67	56
Hilversum	12470	6	60	128	30	28	88	68	96	0	815	116	76	24	127	106	200	154	270	50

Table 1.4 Concentration numbers of the largest Dutch towns, 1909

	inhabitants	1. Pottery	3. Print	4. Building	5. Chemical	6. Wood	7. Clothing	9. Leather	11-13. Metal	14. Paper	15. Text	16. Gas	17. Food	18-19. Agricult.	20. Trade	21. Transport	22-23. Bank	27. Dom	28. Free	29-32. Civil
1.Amsterdam	533131	19	263	109	152	104	190	85	101	160	103	522	140	2	225	140	979	142	183	116
2.Rotterdam	417989	19	172	103	127	122	149	74	113	66	32	290	133	4	192	254	382	106	3	101
3.Den Haag	271280	27	248	154	101	125	199	76	64	105	15	505	84	16	165	87	560	188	45	218
4.Utrecht	119006	71	225	133	238	75	174	84	112	121	3	498	126	9	168	134	347	136	103	188
5.Groningen	74613	21	261	113	170	146	207	78	70	156	61	362	152	9	218	142	364	146	304	124
6.Haarlem	69410	14	424	168	215	85	182	93	122	94	52	180	106	9	214	118	583	155	276	155
7.Arnhem	64019	45	232	149	107	113	174	92	102	103	49	393	114	17	175	95	545	169	263	193
8.Leiden	58253	67	313	124	187	100	171	92	92	110	528	365	150	9	183	66	164	119	281	169
9.Nijmegen	54803	56	263	148	230	55	141	111	78	139	10	338	109	24	122	91	233	143	182	151
10.Tilburg	50405	52	103	88	48	75	124	370	91	57	1157	234	95	24	115	119	174	62	75	30
11.Dordrecht	46355	35	118	79	127	55	21	86	266	40	..	..	43	5	121	83	..	115	269	..
12.Maastricht	37483	3376	..	46	72	24	59	178	41	455	..	..	137	..	95	12	..	114	10	..
13.Leeuwarden	36522	..	166	99	64	47	121	9	56	283	..	208	107	12	190	67	..	151	310	..
14.Apeldoorn	35626	12	62	117	111	127	121	66	54	878	107	..	10	74	72	37	..	103	80	21
15.Den Bosch	34928	..	229	60	..	..	46	339	101	123	46	..	206	4	121	56	..	113	9	..
16.Enschede	34201	36	83	114	233	35	91	65	103	134	2115	..	2	4	97	25	160	55	23	11
17.Delft	34191	264	122	65	629	59	35	98	141	..	..	..	117	9	123	22	..	104	167	..
18.Zwolle	34055	..	171	105	202	142	104	117	136	90	27	..	51	19	163	117	362	115	244	19
19.Schiedam	32055	472	123	47	377	161	6	49	169	145	..	..	139	4	73	41	..	72	302	..
20.Hilversum	31458	..	125	142	60	59	14	85	63	83	229	..	70	13	123	37	..	193	36	..
21.Den Helder	27159	..	78	58	..	236	41	69	149	..	..	..	..	28	105	24	..	66	237	1026
22.Deventer	27787	63	176	137	126	100	90	88	143	82	213	..	99	13	128	41	103	113	55	92
23.Breda	27389	..	117	62	..	166	51	167	110	..	39	..	35	4	109	31	..	128	73	..

2

Peripheral cities and their regions in the Dutch urban system until 1900.[1]

In the Netherlands a kind of urban system emerged very early in the sea provinces, but inland the country cities functioned as regional capitals without many links to cities outside their regions. After 1800 political and economic unification accelerated and the peripheral towns lost their independence. Using two indicators-the division of labour and migration-the article analyses how this process of integration took shape after 1850.

Historians of urbanisation mainly use two sorts of theories to analyse the linkages between cities. The first are central-place theories: centres are hierarchically ordered according to their service functions. Cities act as market places and service centres for smaller centres, which in turn serve and control even smaller ones. This theory was developed by W. Christaller, who also stressed the regularity in size and distance of the centres, a part of the theory that has now been set aside.[2]

The second category contains urban-system theories, based on industrial and commercial differentiation among cities, where systems imply close interurban linkages. This approach is primarily focused on horizontal relations but does not exclude hierarchy: a very 'central' place in the urban system maintains ties to a large population.[3] So it is not surprising that both theories sometimes use the rank-size rule as a tool to reconstruct urban relations, though its regularity and predictive value are discounted.[4]

A combination of both approaches is possible, for both focus on flows of goods, services, and people (migration), to which spread of political power and cultural impulses are sometimes added.[5] Purely industrial centres were incorporated into the urban system as they acquired other central-place functions, which attracted people and gave the centres higher places in the urban hierarchy. In

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[1] *The Journal of Economic History*, Vol. XLVIII, NO.2 (June 1988). The Economic History Association/Cambridge University Press.

[2] W. Christaller, *Die zentralen Orte in Süddeutschland* (Jena 1933)

[3] Jan de Vries, *European Urbanization, 1500-1800* (London 1984).

[4] According to the rank-size rule, the first city is twice as large as the second city, three times as large as the third, and so on.

[5] See Eric Lampard, 'The evolving system of cities in the United States,' in H. S. Perloff and L. Wingo (eds.) *Issues in Urban Economics* (Baltimore, 1968) 81-139; P, Kooij, 'Urbanization: What's in a Name?' in H. Schmal (ed.) *Patterns of European Urbanisation since 1500* (London 1981) 31-61.

Table 2.1. Largest Dutch cities ranked (1000 inhabitants)

1600		1795		1900	
Amsterdam	65	Amsterdam	222	Amsterdam	511
Haarlem	30	Rotterdam	66	Rotterdam	318
Leiden	25	The Hague	41	The Hague	206
Utrecht	25	Utrecht	32	Utrecht	102
Delft	20	Leiden	31	Groningen	67
Middelburg	20	Groningen	24	Haarlem	62
Groningen	19	Haarlem	21	Arnhem	57
's-Hertogenbosch	18	Middelburg	20	Leiden	54
Enkhuizen	17	Dordrecht	18	Nijmegen	43
Zaandam	16	Maastricht	18	Tilburg	41
Dordrecht	15	Leeuwarden	16	Dordrecht	38
Rotterdam	13	Delft	15	Maastricht	34
Gouda	13	's-Hertogenbosch	13	Delft	32
Hoorn	12	Nijmegen	13	Leeuwarden	31
Nijmegen	12	Zwolle	12	Zwolle	31
Maastricht	12	Gouda	12	's-Hertogenbosch	31
Alkmaar	11	Zaandam	10	Schiedam	27
Leeuwarden	11	Arnhem	10	Deventer	26
The Hague	10			Breda	26
				Apeldoorn	26
				Den Helder	25
				Enschede	24
				Gouda	22
				Zaandam	21

Sources: For 1600: Jan de Vries, *European urbanization, 1500-1800* (London 1984); for 1795: J.C. Ramaer, *Geschiedkundige atlas van Nederland*; for 1900: Census 1899.

fact, only then did they become multifunctional central places, which is the best definition of a city.

On the other hand, central-place systems have been analysed on a regional scale and urban systems on an international scale. This has led Paul Hohenberg and Lynn Hollen Lees to speak of a dualistic system, consisting of a network system and of regional central-place systems, whose upper-level cities are linked with the urban network.[6] Since this article is dedicated to peripheral cities, the Hohenberg-Lees distinction seems useful, but it is important to bear in mind that as time proceeds, the mixing of the two systems becomes very complicated.[7]

[6] Paul M. Hohenberg and Lynn Hollen Lees, *The Making of Urban Europe, 1000-1950* (Cambridge, Mass. 1985) chap. 2.
[7] Ibid., 238-47.

The Dutch urban system before 1800

The territory now called the Netherlands is one of the earliest intensively urbanised areas of Western Europe. In 1600 it contained 19 cities with more than 10,000 inhabitants (see Table 2.1). One-fourth of the population lived in those cities.[8] While in other early urbanised areas such as northern Italy, Spain, and parts of Germany, the number of large cities dropped after 1600, in the Netherlands 18 such cities remained in 1800, with two exceptions the same ones as two centuries before.[9] Their location is shown on Map 2.1. The most striking fact is that they were mainly centred in the west. Outside Holland the distances between the densely populated centres were much larger, though still modest by standards other than those of the Low Countries.

Were there any relations between these cities and what were their spheres of influence? The literature provides two answers, one by Jean-Claude Boyer, the other by Jan de Vries.[10] Boyer implicitly combines the urban-system and the central-place theories, but pays most attention to the latter. Therefore he searches for central functions and hierarchical positions, trying nearly all possible indicators. Although his observations are rather descriptive and fragmented, he found some kind of urban system in the seventeenth century, headed by Amsterdam and mainly confined to Holland, Zeeland, and Utrecht provinces.

The article by Jan de Vries, which is in the urban-system tradition, is much more analytical. He takes the construction of *trekvaarten* (canals) for barges as an indicator, because this efficient new means of transport reflected the integration of cities into an urban network, also mainly situated in the three provinces mentioned above. After 1700 this urban system lost its cohesion; Amsterdam gained dominance over a part of it, while the rest was centred around Rotterdam.[11] Here the hierarchical concept comes in. But how did the peripheral cities fit into the system? De Vries argues that around 1700 the large cities in the North, Groningen, and Leeuwarden, which were connected by *trekvaarten*, were integrated into the urban system, the Zuiderzee acting as a unifier.[12] Leeuwarden indeed had some trade relations with Amsterdam via the Frisian towns on the border of the Zuiderzee, but the links of Groningen with the urban system were very weak. Groningen's link to Leeuwarden was roundabout, passing through Dokkum in the extreme north and mainly promoted by that city, which had lost its place in the Republican naval organization and was trying to keep its transport functions. In fact, of the passengers embarking at Groningen, the greater part had already disembarked in the region's villages before the barge arrived in

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[8] Jan de Vries, *European Urbanization,* 29, 39.

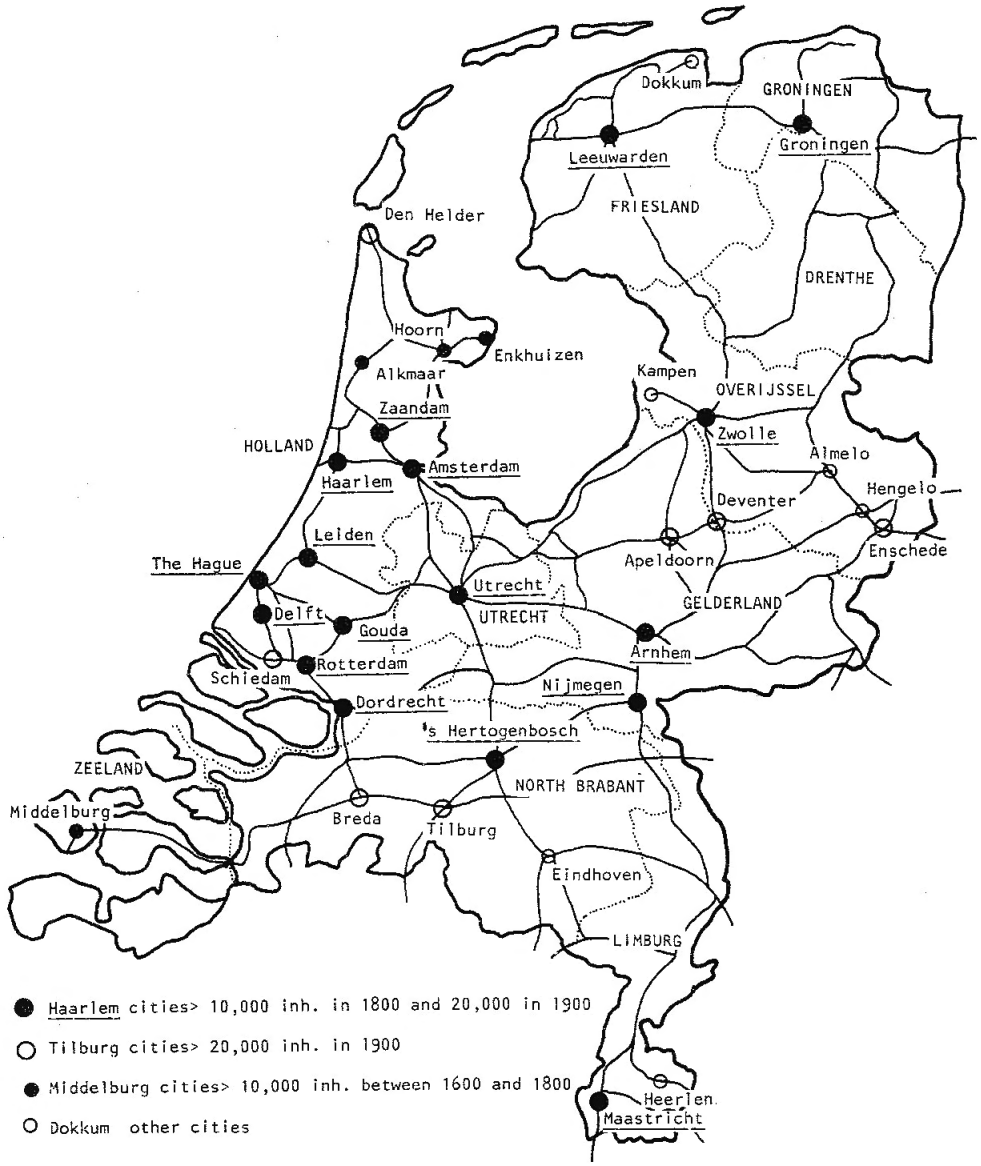
[9] Alkmaar, Enkhuizen, and Hoorn lost their rank mainly due to the rise of Amsterdam. Newcomers were Zwolle and Arnhem. In a way these changes announced the events to come.

[10] Jean-Claude Boyer, *L'Evolution de l'organisation urbaine des Pays Bas* (Lille 1978); Jan de Vries, 'Barges and capitalism: Passenger transportation in the Dutch economy 1632-1839', in *A.A.G. Bijdragen,* 21(1978), 33-139. The books were issued at almost the same time.

[11] De Vries, 'Barges and capitalism', 347-54.

[12] Ibid., 64-65.

Map 2.1 Largest Dutch cities and the railway system, 1910



Dokkum.[13]

The other peripheral cities do not appear in de Vries's story, but Boyer has some observations on them. In his view the links of the peripheral cities with the urban system were not very strong in the seventeenth and eighteenth centuries. As tracked by the distribution of tropical products, the direct influence of Amsterdam stretched as far as Leeuwarden, Zwolle, Deventer, Arnhem, Nijmegen, and 's Hertogenbosch but not as far as Groningen and Maastricht.[14] But this indicator overstates the degree of integration, since Amsterdam had a firm monopoly just on these products, and the volume of trade was small.

In my view the peripheral cities in these centuries were primarily concerned with obtaining a large sphere of influence, a region of their own.[15] This was accentuated by the particular structure of the Dutch Republic, which was in fact a union of seven autonomous provinces. This situation granted the regional capital extra central-place functions and increased its growth potential. Moreover, when the Dutch revolt detached the inland provinces from their former, international networks, the peripheral cities had an even greater interest in the regions immediately around them.

Groningen is a good example of this development. Having lost its connections with Germany, it concentrated on its immediate region. In the beginning of the seventeenth century, Groningen sat like a spider in the centre of a web of newly constructed waterways. The city even bought large peat fields within its region and started to exploit them. By contrast, Leeuwarden never succeeded in subjecting the lesser towns in the province of Friesland in the way Groningen did. The smaller towns kept market functions of their own, connected with Amsterdam and subordinated to that city.

Three cities in Overijssel-Deventer, Kampen. Zwolle-had once belonged to the Hansa organisation and so enjoyed far-reaching connections. These links slackened during the sixteenth century. Deventer, the primus inter pares, suffered especially from the repercussions of the Dutch revolt.[16] Then Zwolle took the lead, but did not succeed in establishing a region of its own. Amsterdam was then able to penetrate into this region.[17]

In Gelderland the commercial town of Nijmegen was transformed into a fortress, and during the wars its strategic situation between two rivers changed from a commercial advantage into a serious handicap.[18] In the course of the eighteenth century Arnhem only barely passed the level of 10,000 inhabitants. Thanks to its pleasant surroundings, however, it developed into a residential city even though

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[13] Ibid, 119

[14] Boyer, *L' Evolution*, 163-69.

[15] In the international literature there is no consensus on the size of regions. In Dutch economic history the term is used to indicate an area of limited scale, mostly a province or a part of it.

[16] Paul Holthuis, 'Deventer in oorlog: Economische aspecten van de militaire conjunctuur 1591-1609,' in *Economisch- en Sociaalhistorisch Jaarboek,* 50 (1987), 32-51.

[17] Boyer, *L'Evolution,* 166.

[18] Hubert Nusteling, *Binnen de vesting Nijmegen* (Zutphen 1979).

it had few central functions for its region.

The other peripheral large cities, 's Hertogenbosch and Maastricht, did not belong to independent provinces. They were parts of the *Generaliteitslanden* in the south, which were obtained by the peace with Spain in 1648 and were governed directly by the federal government. Maastricht had few links with the rest of the country, but retained some of its international relations with Germany and the southern Netherlands. The region controlled by 's Hertogenbosch was very extensive.

As a result of their regional orientation and their relative autonomy, the peripheral cities did not profit a great deal from the Golden Age. but they also did not decline in the eighteenth century as some cities in Holland did, the textile manufacturing cities of Leiden and Haarlem being the most striking examples (see Table 2.1).

The Dutch urban system in the nineteenth century

The half-century between 1850/60 and 1900/10 witnessed the formation of an integrated Dutch urban system. Cities with more than 20,000 inhabitants in 1900 are shown in Table 2.1 and Map 2.1. Since the population of the Netherlands doubled in the nineteenth century, the higher threshold makes for a better comparison with the earlier period. With the rise of cities in the east and south, the main towns are now more regularly spread over the country. The only newcomers in the west are Schiedam, with its gin industry, and, rather peripherally situated, Den Helder, which was designated the main naval port of the newly founded Kingdom of the Netherlands. Middelburg stayed below the threshold. The other five newcomers were peripheral cities: two old towns obtained new functions-Breda and Deventer; the other three small centres which grew rapidly were Apeldoorn, Enschede, and Tilburg.

One key to the formation of an integrated urban system was the development of industrial areas outside Holland. Around Tilburg as well as Enschede an old textile proto-industry transformed itself into a manufacturing sector with international relations. In Apeldoorn the manufacturing of paper became important, and the town also developed as a residential centre. Earlier, mainly rural, examples of specialisation have been studied by J. A. de Jonge: potato-flour and straw-board in the province of Groningen; cottons in Overijssel; shoe, leather, and woolen manufacturing in North Brabant; butter in Friesland, and fruit preserves in Gelderland and Limburg.[19] With the exception of textile and shoe manufacturing, these small-scale and sometimes season-bound industries did not foster urbanisation.

True regional specialisation outside Holland awaited the emergence of an integrated transportation system. This was constructed in the second half of the

[19] J. A. de Jonge, 'The role of the outer provinces in Dutch economic growth in the 19th century,' in J. S. Bromley and E. H. Kossmann (eds.) *Britain and the Netherlands, vol. 4: Metropolis, dominion, and province* (Den Haag 1971) 208-26.

nineteenth century and consisted of a combination of canals, railroads, and roads. Investment in railways reached its peak between 1850 and 1885. This was followed by a canal boom between 1885 and 1910.[20] The remainders of the old *trekvaart* network complemented the new canals, as the new dense system of tramways did the railways. At first most attention was given to the connection of the peripheral cities and regions with Holland, but around 1900 north-south connections were constructed. Looking at the towns in relation to the railways and waterways makes clear the correlation between population growth and accessibility by means of transport, although the direction of causation remains unclear.[21]

According to recent estimates, the starting point of modern Dutch economic growth has to be placed around 1850, coincident with the railway boom. Industrialisation-textiles, foods and allied products, metals-had a larger share in it than is generally accepted, though the growth of the service sector probably still dominated.[22] This special pattern of modern Dutch economic growth should explain why the changes in the rank-size order of Dutch cities were not as dramatic as in the United Kingdom. In most old cities the initial lack of industrial functions was compensated by the growth of existing commercial central-place functions and the initiation of new ones. The only pre-dominantly industrial city which attained a high rank in the nineteenth century was Tilburg (see Table 2.1). As demonstrated below the old towns took an important share in the industrialisation wave beginning in the last decade of the nineteenth century, and so kept a high rank.[23] The example of Tilburg after 1900 was imitated only by 'Philips-town' Eindhoven, by Enschede (textiles), and by Heerlen in the newly developed mining district in Limburg. New cities were small in number. Between 1900 and 1930 only 13 centres succeeded in collecting enough functions to be classified as genuine cities and none numbered more than 30,000 inhabitants.[24] But the rise of smaller centres then did check the growth of the largest cities. After 1910 their share in the total population decreased and the population became more regularly spread.[25] The urban system became denser and less hierarchical.

The period between 1850/60 and 1910/14 thus proved to be a very special one for Dutch urbanisation. The Dutch urban system was then in its most mature and balanced phase. Suburbanisation was only beginning and so

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[20] O. A. van der Knaap, *Population Growth and Urban Systems Development: A Case Study* (Boston 1980) 73.
[21] Ibid., 105. Correlation analysis to distinguish a dependent and an independent variable gave insignificant results.
[22] J. L. van Zanden, 'Economische groei in Nederland in de negentiende eeuw: Enkele nieuwe resultaten,' in *Economisch- en Sociaalhistorisch Jaarboek,* 50 (1987) 51-77.
[23] See for the 'industrial revolution' in the Netherlands: J. A. de Jonge, *De industrialisatie in Nederland tussen 1850 en* 1914 (Amsterdam 1968).
[24] Pim Kooij, 'Stad en platteland,' in F. L. van Holthoon (ed.) *De Nederlandse samenleving sinds* 1815 (Assen 1985) 93-117, esp. 111-12.
[25] Van der Knaap, *Population Growth,*68.

was modern industrialisation outside the cities. This was the era of the large cities, and it was also marked by the total incorporation of the larger peripheral towns into a national urban system.

Peripheral cities and the division of labour around 1900

As they lost their political autonomy, peripheral cities had to develop closer interurban links. Some political central-place functions were taken over by The Hague, the centre of government. Amsterdam dominated some central-place functions in the services sector (banking, insurance). Although commercial relations of the peripheral towns with places outside their regions (which had been at a low level) grew, they were largely controlled by branches of trading companies from Amsterdam and Rotterdam, so incorporation into the urban system implied subordination to the three largest cities in the west, which together formed the top of the Dutch urban hierarchy.[26] Nonetheless, the peripheral cities profited greatly from better access to the Dutch market.

Table 2.2 attempts to capture the changes in terms of shifts in sectoral employment shares. In 1860 the principal peripheral towns were service oriented (Groningen, Nijmegen, Leeuwarden, and Breda) or balanced ('s-Hertogenbosch and Arnhem). In the west of the country, however, where services concentrated in the largest cities, some secondary towns already were principally industrial: Haarlem (printing and metal) and Dordrecht (shipbuilding). Better data would probably add Delft (ceramics, weapons, yeast, spirits), Schiedam (gin), Gouda (pottery, candles), and Zaandam (oil, paint) to the list.

The old peripheral cities in 1860 had mainly traditional, region oriented handicraft industry, Maastricht, Zwolle, and Deventer already representing interesting exceptions. Maastricht, situated between the German and Walloon industrial regions, had a head start. The war that followed Belgian independence in 1830 cost Maastricht its external linkages. Belgian refugees and others subsidised by King William I started up new industries. One success story was that of Petrus Regout, who among other things founded a china factory, an arms factory, and a paper mill.[27] Deventer and Zwolle had iron foundries and some food and wood-processing.

By 1900 the differentiation among larger cities had become very clear. The peripheral cities ceased to be self-supporting and no longer produced the whole range of products their regions needed. They could import goods and services from other cities and export those products they had focused on. The different flows of goods and services, which were the result of this development, reflect the linkages between cities, the outlines of the urban system.[28] Intensification of

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[26] Engelsdorp Gastelaars and M. Wagenaar, 'The rise of the Randstad 1815-1930,' in Schmal (ed.) *Patterns,* 229-47.

[27] A. J. F. Maenen, *Petrus Regout* (Nijmegen 1959).

[28] B. Robson, 'The impact of functional differentiation within systems of cities' in Schmal (ed.) *Patterns,*111-31.

Table 2.2. Sectoral distribution of the labour force, 1860 and 1900 (percentages)

	1860		1900	
	Industry	Services	Industry	Services
Amsterdam	46.1%	53.2%	46.9%	52,6%
Rotterdam	43.0	56.6	42.5	56.2
The Hague	46.1	52.4	41.2	53,7
Utrecht	48.2	47.5	44.4	52.2
Groningen★	45.0	52.1	42.3	55.5
Haarlem	51.3	43.9	46.5	49.9
Arnhem★	48.8	48.4	40.7	53.2
Leiden	53.2	45.0	54.0	43.5
Tilburg★			64.2	29.3
Dordrecht	49.9	48.8	46.0	52.8
Nijmegen★	42.4	47.4	40.6	50.8
Maastricht★	53.6	43.5	60.2	38.1
Leeuwarden★	43.9	53.4	37.8	57.6
Delft			56.2	40.3
's- Hertogenbosch★	49.0	49.3	51.7	46.2
Zwolle★	48.7	44.9	39.7	54.0
Schiedam			60.9	36.0
Deventer★	53.0	42.6	50.9	43.5
Breda★	44.8	52.9	46.3	51.3
Apeldoorn★			39.5	30.1
Den Helder★			29.2	62.2
Enschede★			77.4	20.5
Gouda			54.0	42.5
Zaandam			46.1	48.4

★ = 'Peripheral'cities

Source: Census, 1859 and 1899

trade flows coupled with industrial specialisation could push the employment shares in either direction.

Although no data are available to reconstruct the flows, it is possible to examine the heightened interurban division of labour with concentration numbers. These measure the share of one industry's labour force in a given town relative to that town's share of the total population. A number greater than 100 indicates an overrepresented industry. Concentration numbers are given in the Appendix Table for the larger Dutch cities in 1900.[29] Of course most numbers exceed 100 because agriculture was almost absent in cities, but true overrepresentation is well shown.

[29] See for the concentration numbers of 1889 and 1909, Kooij, 'Urbanization,' 52-53.

Industrial specialisation was different in every peripheral city, as it ought to be in a real urban system. Groningen had printing firms and a clothing industry. It was also overrepresented in some food and allied products categories, such as coffee, tobacco, meat products, and sugar. Leeuwarden specialised less, but housed dairies and a large paper mill. Leeuwarden was also the printing centre for Friesland. Zwolle, too, was a printing and newspaper centre, but its neighbour Deventer was far more industrialised, producing bicycles, cast iron, cottons and carpets. Yet Enschede was the true industrial leader of Overijssel. In Gelderland Apeldoorn was a centre for papermaking; Arnhem industrialised little, as did Nijmegen for the time being. The southern peripheral cities also specialised their industrial functions; 's Hertogenbosch featured printing, shoemaking, and the production of cigars. The concentration number for textiles is high for Tilburg, while Breda had iron foundries. engineering works, and a match factory (chemicals). In Maastricht the initiatives of Regout were emulated by others, reinforcing the industrial character of the city. Peripheral cities sometimes specialised in the services too, as some high concentration numbers reflect. Arnhem, a city without industry, became a banking centre.[30] The city attracted relatively wealthy people from the west and from the colonies who provided a clientele for government and railway bonds sold through banks. In some cities (Den Helder, Deventer, Nijmegen, 's Hertogenbosch, Breda) high service numbers also betray the presence of a garrison.

In most peripheral cities, however, the high concentration numbers in the services sector indicate a continuing regional central-place role. In Friesland Leeuwarden in addition controlled the butter industry, and Groningen, the regional capital, housed the head offices of potato-flour and straw-board factories. In other provinces the dominant position of the regional capital was somewhat challenged by the incorporation of old specialised towns into the urban system and the emergence of new ones. Thus Zwolle had to leave some central-place functions to its adjacent cities, Kampen and Deventer. In the eastern part of Overijssel the textile town of Enschede and its smaller neighbours Hengelo and Almelo collected a complete range of central-place functions.[31] They served the eastern part of Gelderland, while the west of the province was the hinterland of Apeldoorn, Arnhem, and Nijmegen. Nijmegen also became the export centre for the brickyards along the river Waal. The Waal had become a mainstream in European trade connections, but existing urban histories give no indication that Nijmegen had a share in this trade, which was dominated by Rotterdam.[32]

The situation around 's Hertogenbosch changed fundamentally. At the beginning of the nineteenth century, the city dominated the larger part of the vast province of North Brabant. But first Tilburg emerged and, after the foundation

[30] J.Th.W. Willemsen, *De volkshuisvesting in Arnhem* (Arnhem 1969).
[31] Jan Buursink, *Centraliteit en hiërarchie* (Assen 1971) 116-39.
[32] Johan de Vries, *Nieuw Nijmegen, 1870-1970: Moderne economische geschiedenis van de stad Nijmegen* (Tilburg 1969).

of the Philips plant in 1891, Eindhoven's great spurt began. By the beginning of the twentieth century, this city had gained a region of its own. During the period observed here, this development was only in its initial stages, but Tilburg had already taken over some functions. Together 's Hertogenbosch and Tilburg controlled the regional shoe industry, which was of national importance as the low concentration numbers in this category in other cities show. In the west of North Brabant, Breda centred its own region.[33]

Perhaps Maastricht had the best opportunities to gain control over an extended region. But around 1900, as the Limburg coalfields opened up, the industrial centre of gravity shifted to the fast-growing town of Heerlen. Maastricht remained the most complete city, however.

Peripheral cities and migration around 1900: the example of Groningen

Urban systems are characterised not only by flows of goods and services but also by flows of people. It is possible to measure to what extent people migrated along the communication lines of the urban system and how strongly capital cities in the central-place system pulled people from the lesser centres in their hinterland. Since peripheral cities combined functions in both systems in the second half of the nineteenth century, it is very useful to analyse migration for just those cities. I have undertaken this very labour-intensive analysis so far for one city: Groningen, in many ways the ideal type of a peripheral city.

To analyse Groningen migration I tested samples taken at random from the Civil Register every 10 years between 1870 and 1910.[34] The evidence on the changing places of origin is given in Table 2.3. Most immigrants, with overrepresentation of women and families, came from the province of Groningen and the rest of the north. In the eighties this percentage rose considerably, due to the agrarian depression. After that decade Groningen increasingly attracted people living outside the north.

In 1870/80, 14.1 percent of the immigrating units came from cities with more than 20,000 inhabitants. By 1900/10 this rose to 21.6 percent. The share of Amsterdam, Rotterdam, and The Hague grew from 6.5 to 11.9 percent. Of the other larger towns, in the beginning only those closest to Groningen-Leeuwarden, Zwolle, Deventer-delivered a substantial share. After 1900, however, the other large cities, with the exception of Tilburg, participated, the number of migrants proportional to their size. This shows well the complete incorporation of Groningen into the urban system.

The proportions of migrants coming from each part of the north helps fix the boundaries of a regional Groningen migration system. It contained the whole province of Groningen, the extreme east of Friesland, and the north of the spar-

33 Jan Buursink, *Centraliteit*, 139-70.

34 A full account is given in Pim Kooij, *Groningen 1870-1914: Sociale verandering en economische ontwikkeling in een regionaal centrum* (Groningen 1986).

Table 2.3 Origin of Groningen immigrants (percentages)

Region	Individual Men				Individual Women				Families			
	1870–1880	1880–1890	1890–1900	1900–1910	1870–1880	1880–1890	1890–1900	1900–1910	1870–1880	1880–1890	1890–1900	1900–1910
Province of Groningen	46	51	45	42	57	66	60	57	47	60	51	55
North	26	27	22	20	23	21	15	17	27	22	21	15
Middle	13	9	12	15	11	5	7	7	10	3	6	9
West	9	10	18	14	8	8	15	16	10	10	14	15
South	3	1	0	4	0	0	2	1	3	1	5	3
Foreign Countries	3	1	3	3	0	0	2	2	2	3	2	4
N	*353*	*336*	*263*	*342*	*276*	*316*	*295*	*313*	*261*	*239*	*215*	*215*

Note: North includes Friesland and Drenthe; Middle includes Overijssel, Gelderland, and Utrecht; West includes North and South Holland; South includes Zeeland, Brabant, and Limburg. *Source:* See text.

sely populated province of Drenthe.[35] Groningen acted as a link between the regional and the national migration system. Almost all people who left the north went there first. But for most regional migrants Groningen was also a barrier. As Table 2.4 shows, they either stayed or returned where they had come from.[36] Return migration was indeed important. Even among Groningen immigrants, 10 percent proved to have been born in the city itself and a fourth of the 'immigrants' from Amsterdam, Rotterdam, and The Hague were in fact returning to their place of birth.

About 25 percent of Groningen's immigrants took up domestic service, nearly all unmarried women with a low level of education. A job as domestic servant was almost their only opportunity. The greatest share of unmarried men, a fourth in 1900, became journeymen bakers, followed by shop assistants. The shares of merchants, valets, clerks, shoemakers, tailors, carpenters, printers, butchers, or labourers stands at 2 to 4 percent. Men with higher education found their occupations in administration, at the university or other institutions of education, in court, in banking, and in the professions. These were mainly heads of families who traveled relatively large distances. Better-educated, unmarried women also traversed long distances to obtain a job as teacher or nurse.

On a national scale it is difficult to draw a clear distinction between migration in the setting of an urban network and in the setting of a central-place system. The central-place system for instance shows up in the fact that migration was in

[35] Drenthe was never a full member of the Republic. It was covered with large peat fields which were mainly exploited in the second half of the nineteenth century. Groningen had a central place in the peat trade.

[36] Real mobility was even higher because the sample in Table 2.4 also includes people arriving at the end of the decade and perhaps departing at the beginning of the next.

Table 2.4 Mobility of immigrants to Groningen from the province or Groningen (percentages)

	1870–80	1880–90	1890–00	1900–10
Died	2%	10%	1%	2%
Stayed in city	54	54	51	49
Returned to province of Groningen	30	33	34	33
Went elsewhere in the north	5	4	4	5
Went to Amsterdam, Rotterdam, The Hague	3	4	3	5
Went to other city over 20,000	2	1	2	2
Went to other municipality	2	2	3	3
Went to foreign country	2	1	1	0
N	*443*	*527*	*407*	*451*

Note: The table reflects the situation at the end of the decade of migrants during the decade. *Source:* See text.

part hierarchically structured, The three largest cities in the west attracted a considerable proportion of the emigrants from the province of Groningen who left the north (see Table 2.4). Retail clerks, for instance, came to Groningen from the smaller towns in its region and then moved to the top of the urban hierarchy. On the other hand, Amsterdam, Rotterdam, and The Hague sent people to occupy top positions in the Groningen service and public sectors. The urban network is indicated by the immigration of entrepreneurs from other large cities in the Netherlands. In 1900 six of the thirteen largest factories in Groningen had managers who originated in one of those cities. They largely induced the increased industrial specialisation.

After 1900 an interesting change took place in the migration pattern. More and more people who were born in the areas near the city left the Groningen region without residing any length of time in the city. The more distant industrial area in the southeast of the Groningen region also showed this pattern. This means that Groningen was beginning to lose its function as a link between a regional and a national migration system. Smaller centres were incorporated directly into the urban network.

Conclusion

My analysis of the division of labour and migration reveals three stages in the relation of peripheral cities to the Dutch urban system. First, between 1600 and 1850 the system of cities was mainly limited to the west of the country, with the peripheral cities semi-independent from this system. Each dominated a more or less extended region of its own. Economic, political, and cultural contacts with this area were mediated by the regional capital. Second, between 1850 and 1900 the large peripheral cities became integrated into one urban system characterised by new, efficient means of transport and by a growing division of labour. The three largest Dutch cities-Amsterdam, Rotterdam, and The Hague-did not directly influence the hinterland of the peripheral cities. These kept their positions

as regional gateways. But industrialisation favoured the emergence of some new large towns that carved out regions of their own at the expense of the regional capitals. Third, after 1900 the subordination of regions to their capital cities diminished further. Small centres, notably ones based on industry, began to claim their full-fledged place in the Dutch urban system. This system therefore ceased to be fully urban in the nineteenth-century sense of city-based.

Table 3.5 Concentration numbers of the largest Dutch cities, 1900

	Population	Pottery, Glass	Printing	Chimical Products	Wood,Cork, Straw	Clothing	Leather, Rubber	Metal, Shipbuilding	Paper	Textiles	Gas, Electricity	Foods and Allied Products	Trade	Traffic, Transport	Banking, Insurance	Professions	Free Labor	Civil Service
Amsterdam	510,853	18	234	113	99	166	80	126	142	9	208	118	170	131	359	214	187	91
Rotterdam	318,407	13	155	96	132	146	74	139	82	31	203	113	169	202	191	157	475	90
The Hague	206,022	16	217	78	127	180	84	103	60	16	235	84	139	94	206	240	74	198
Utrecht	102,086	88	205	143	101	170	89	135	121	12	362	119	125	159	242	149	117	178
Groningen	66,537	16	285	136	129	189	89	91	122	33	210	143	177	149	156	229	286	128
Haarlem	61,702	9	429	209	73	176	82	194	89	54	157	99	135	153	188	174	196	107
Amhem	56,812	25	208	70	109	171	100	111	128	48	236	97	140	113	235	215	28	176
Leiden	53,657	30	306	139	115	168	117	133	155	538	261	136	146	68	134	151	126	187
Nijmegen	42,755	42	220	146	76	145	94	101	113	4	181	106	114	121	124	105	144	177
Tilburg	40,628	63	70	60	57	131	316	131	31	1162	157	95	82	146	126	30	1	21
Dordrecht	38,386	35	172	155	112	144	86	307	110	4	202	118	147	220	237	158	3	107
Maastricht	34,220	2159	78	67	64	140	118	94	813	21	83	139	108	92	126	113	2	110
Delft	31,589	204	136	639	112	144	105	205	79	15	191	202	123	73	95	111	205	127
Leeuwarden	31,162	55	240	138	94	182	87	102	658	24	190	108	216	132	184	209	275	165
Zwolle	30,560	5	183	265	135	128	112	120	112	27	201	130	142	241	171	138	58	109
s-Hertogenbosch	30,517	13	302	47	92	150	306	167	199	68	86	265	128	104	153	182	44	195
Schiedam	27,126	229	184	929	194	94	69	87	226	11	176	356	120	89	101	72	193	74
Deventer	26,212	104	170	183	150	115	89	217	67	220	239	165	142	83	107	108	8	194
Breda	26,096	2	173	402	90	151	147	202	62	37	174	149	115	76	138	115	97	358
Apeldoorn	25,761	7	63	85	139	154	71	73	1204	92	97	61	67	81	63	95	1	58
Den Helder	25,159	0	88	24	32	70	86	235	17	2	77	55	99	66	32	48	243	925
Enschede	24,353	28	87	29	50	120	61	113	281	2299	215	51	95	60	88	56	4	60
Gouda	22,085	332	193	1342	120	175	88	116	132	171	165	148	163	118	134	81	69	109
Zaandam	21,146	12	134	515	85	54	58	223	217	10	151	161	214	96	82	59	538	63
Percent labour force		1.3%	0.7%	0.5%	2.0%	4.8%	2.0%	4.3%	0.4%	2.6%	0.2%	5.9%	9.7%	7.0%	0.5%	0.7%	1.7%	3.5%

Note: Situation as of 31 December 1899.*Source*: Census 1899

3

Urban History in the Netherlands.[1]

Urban history as a discipline in the Netherlands started in 1974, when Jan de Jonge, Professor of Economic History at the Free University in Amsterdam, published a long article on the city of Delft.[2] He analysed the transformation in the nineteenth century of this quiet tidy place into an industrial centre with the help of a number of financial, demographic, and economic sources, which until that time had seldom been utilised by historians. Innovative in Dutch historiography was also the link he made between town and countryside in terms of centre and hinterland. In the same year, this relationship between centre and hinterland became the subject of a conference of Dutch historians interested in cities. At this conference, attention was paid to the developments in Great Britain and the United States, where pioneers like Jim Dyos et al. and Eric Lampard et al. were creating a framework and a forum for urban history as a new, distinctive historical sub-discipline.[3]

An actual link with international mainstream in urban history was effected in 1979, when the Dutch Association of Urban History (Nederlandse Vereniging voor Stedengeschiedenis), founded by Jan de Jonge and some colleagues, organised an international conference on 'Urbanisation and Functional Differentiation'.[4] At this conference, among other things, Jan de Vries from Berkeley presented the kernel of his book on European Urbanisation[5], a fine article on urbanisation in the west of the country was launched[6], and I applied a method of measuring functional differentiation by calculating concentration coefficients.[7] The main organiser of the conference was Herman Diederiks of Leiden University, who in the subsequent years organised more conferences of this kind: The Visible Hand and the Fortune of Cities, and Cities of Finance.[8] Together with Peter Clark, Bernard Lepetit, and Herman van der Wee, Diederiks also initiated

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[1] Published in *Helsinki Quarterly* 3/2002, 18-24.
[2] J.A. de Jonge, 'Delft in de negentiende eeuw.' *Economisch- en Sociaalhistorisch jaarboek* 37 (1974) 145-248.
[3] P. Kooij, 'Stadsgeschiedenis en de verhouding stad-platteland', *Economisch- en Sociaalhistorisch Jaarboek* 38 (1975).
[4] H. Schmal,(ed) *Patterns of European Urbanisation since 1500* (London 1981).
[5] J. de Vries,'Patterns of urbanization in pre-industrial Europe, 1500-1800', in Schmal, *Patterns*, 77-111.
[6] R. van Engelsdorp Gastelaars & M. Wagenaar, 'The rise of the 'Randstad' 1815-1930', in Schmal, *Patterns*, 229-247.
[7] P. Kooij, 'Urbanization. What's in a name?, in Schmal, *Patterns*, 31-61. See also P.Kooij, 'Peripheral cities and their regions in the Dutch urban system until 1900' *The Journal of Economic History* 48 (1988) 357-371.
[8] Herman Diederiks, Paul Hohenberg, Michael Wagenaar (eds.) *Economic policy in Europe since the late Middle Ages. The visible hand and the fortune of cities* (Leicester/London/New York 1992).
Herman Diederiks & David Reeder, *Cities of finance* (Amsterdam 1996).

the international conferences of the European Association of Urban Historians. He even organised the first one in Amsterdam in 1992.

On entering this international domain, a specific problem of Dutch urban history emerged. Although Dyos as the editor of the *Urban History Yearbook* welcomed everybody who studied cities and developments in cities in a scientific way to the forum on urban history, the Dutch needed a framework. This is because Dutch historiography is for the most part urban based. The Low Countries, together with some parts of Italy, were the first urbanised areas in Europe and, moreover, The Dutch Republic was a federation of provinces and cities. Therefore, individual cities had been paid a lot of attention within the context of general history, which had not been the case in more centralised countries like the United Kingdom or France. Since it was no use to rebaptise Dutch general history as urban history, a more limitative framework was needed.

In this quest, the first Dutch urban historians derived their inspiration mainly from geography.[9] Towns and cities were defined as multifunctional central places: concentrations of political, economic, social, and cultural functions or activities. These concentrations required a specific morphology, which in its turn influenced processes and activities. It is this interaction between space and function, between morphology and activity, which became the core of Dutch urban history. Since 1976, eleven doctoral dissertations which elaborate this relationship have been published. I will now briefly characterise the directions in which the interests of Dutch urban historians have spread.

Henk van Dijk analysed the relationship between the booming of the Rotterdam economy and the demographic growth of the city until 1880, which was mainly caused by immigration.[10] Herman Diederiks concentrated on the economic delay in Amsterdam around 1800, and the demographic consequences of this on the individual quarters of the city, each of which had a specific socio-economic character.[11] Piet 't Hart interrelated economic and demographic development in Utrecht at the beginning of the 19th century.[12] Pim Kooij reconstructed the economic structure as well as the social structure of Groningen around 1900 in relation to residential segregation and migration to and from this regional capital.[13] Michiel Wagenaar analysed city formation in Amsterdam, and residential segregation in the context of the extension of Amsterdam around 1900.[14] Clé Lesger reconstructed the urban network system in the northern part of the province of Holland in the early modern period, and analysed the position

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[9] P. Kooij, *Stadsgeschiedenis*. Cahiers voor lokale en regionale geschiedenis 4 (Zutphen 1989). Pim Kooij, 'The Netherlands' in Richard Rodger (ed.) *European urban history. Prospect and retrospect* (Leicester/London 1995).

[10] H. van Dijk, *Rotterdam 1810-1880. Aspecten van een stedelijke samenleving* (Schiedam 1976).

[11] H.A. Diederiks, *Een stad in verval. Amsterdam omstreeks 1800* (Amsterdam 1982).

[12] P.D. 't Hart, *De stad Utrecht en haar inwoners. Een onderzoek naar samenhangen tussen sociaal-economische ontwikkelingen en de demografische geschiedenis van de stad Utrecht 1771-1825* (Utrecht 1983).

[13] P. Kooij, *Groningen 1870-1914. Sociale verandering en economische ontwikkeling in een regionaal centrum* (Groningen 1986).

[14] M.F. Wagenaar, *Amsterdam 1876-1914. Economisch herstel, ruimtelijke expansie en de veranderende ordening van het stedelijk grondgebruik* (Amsterdam 1990).

of Hoorn as a satellite of Amsterdam.[15] Carolien Koopmans focussed on the 19th century transformation of Dordrecht into an industrial city after the transfer of its major functions as a seaport to Rotterdam.[16] Paul Holthuis studied the defensive functions of Deventer in relation to the demographic consequences of the loss of its hinterland during the Eighty Years War.[17] Rolf van der Woude concluded that Leeuwarden was the regional capital which had profited least from the economic specialisation in the 19th century, which had been caused by new transport opportunities.[18] Carl Denig studied residential segregation in 19th century Utrecht,[19] and Henk Schmal did the same for The Hague.[20]

As is now clear, the leading topics in Dutch urban history are residential segregation, demographic development, especially migration, the functioning of cities within the urban network system, and the relationship between regional capitals and their hinterlands. The studies of residential segregation have mainly focussed on the second half of the 19th century. In that period, industrialisation started in the Netherlands. Industry was for the most part located in the cities. This attracted large groups of immigrants. At the same time, most cities were allowed to remove their fortifications. This resulted in prestigious extensions. The elite seized the opportunity to create residential quarters for themselves and left the overcrowded and socially mixed inner cities. Separate new quarters were also built for labourers and members of the middle class.

Most studies on immigration also covered this very dynamic period in Dutch urban history. Around 1870 there was a pattern of stepwise migration from the countryside to the regional capitals, and from there into the urban network system. This process was accompanied by a return migration of about 30%. By the turn of the century, migration from a number of second rank places skipped the regional capital, which meant that these places had found their own connection with the urban network system.[21]

The urban network system in the Netherlands was given shape by Jan de Vries in his innovative study of the transportation network by barge in the 17thh and 18th centuries.[22] The railway and tramway systems in the 19th century promoted further specialisation in regional capitals. In line with the theory of Paul

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[15] C.M. Lesger, *Hoorn als stedelijk knooppunt. Stedensystemen tijdens de late middeleeuwen en vroegmoderne tijd* (Hilversum 1990).
[16] Carolien Koopmans, *Dordrecht 1811-1914. Een eeuw demografische en economische geschiedenis* (Hilversum 1992).
[17] Paul Holthuis, *Frontierstad bij het scheiden van de markt. Deventer: militair, demografisch, economisch; 1578-1648* (Deventer 1993).
[18] Rolf van der Woude, *Leeuwarden 1850-1914. De modernisering van een provinciehoofdstad* (Leeuwarden 1994).
[19] Carl Denig, *Utrecht van ancien régime tot nieuwe tijd. De bewoning van de Utrechtse binnenstad in haar ruimtelijke structuur* (Utrecht 1995).
[20] Henk Schmal, *Den Haag of 's Gravenhage. De 19de-eeuwse gordel, een zone gemodelleerd door zand en veen* (Utrecht 1995).
[21] Pim Kooij, 'Migrants in Dutch cities at the end of the nineteenth century' in Denis Menjot & Jean-Luc Pinol (eds.) *Les immigrants et la ville* (Paris 1996) 207-230. See also this volume.
[22] J. de Vries, 'Barges and capitalism: passenger transportation in the Dutch economy 1632-1839' A.A.G. Bijdragen 21 (1978) 33-139.

Hohenberg and Lynn Hollen Lees,[23] the regional capitals outside the heavily urbanised western part of the country acted as gateways between the urban network system and the regional central place system.[24] In the 20th century, these regional capitals mainly lost this gate function, due to initial industrialisation in the countryside, de-industrialisation in the cities, and suburbanisation, as has become clear from a study of six European regional capitals, including the city of Groningen. Many regional capitals were saved from depopulation by the growth of the services sector, a university, tourism, and sometimes modern industry.[25]

Apart from the studies mentioned above, many books and articles have been written about the urban infrastructure: health care, education, housing, and poor relief. The aim of the authors, however, was not to make a contribution to urban history, but rather to the history of medicine, the history of education, etcetera. The town or city, with its limited scale, offers good opportunities for exploring the various aspects of social infrastructure and their interrelationships before tackling them on a national scale. Dutch urban historians, like historians elsewhere, are still discussing whether this kind of medical history etc. in an urban context may be considered as urban history. At any rate, no discussion is needed about infrastructural studies related to space, such as the topography of contagious diseases like cholera,[26] or building companies.[27] Studies where an aspect of the social infrastructure is linked to the specific social structure of a town may be considered as urban history, for example poor relief in Alkmaar,[28] or in Zwolle.[29] The same is the true of some studies of Amsterdam and Rotterdam,[30] which primarily concentrate on the labour market. For Amsterdam, Van Zanden and Knotter discovered that during the second half of the nineteenth century, the labour market acquired a dual character: on the one hand were the big mechanised export industries which paid relatively high wages, and on the other were the traditional craft industries, which acted as a reservoir for the modern ones.[31] The same was the case in Groningen[32].

So far, all the studies mentioned have a socio-economic character. Political and cultural studies in which the city is more than just a décor are rare. There are some studies of Amsterdam in which politics is linked to social or economic factors, for example the book by Boudien de Vries on the social composition of the electorate in the 19th century, or that by Diederik Aten on the political

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[23] Paul Hohenberg & Lynn Hollen Lees, *The making of urban Europe 1000-1950* (Cambridge Mass. 1985).
[24] Kooij, 'Peripheral cities'.
[25] Pim Kooij & Piet Pellenbarg, *Regional Capitals. Past, present, prospects* (Assen 1994).
[26] P.D. 't Hart, *Utrecht en de cholera* (Zutphen 1990).
[27] C. Schade, *Woningbouw voor arbeiders in het 19e eeuwse Amsterdam* (Amsterdam 1981).
[28] L.F. van Loo, *Armelui. Armoede en bedeling in Alkmaar 1850-1914* (Bergen 1986).
[29] Hilde van Wijngaarden, *Zorg voor de kost: armenzorg, arbeid en onderlinge hulp in Zwolle* (Amsterdam 2000).
[30] H.J. Visscher, *Rotterdammers op de trappen der historie* (Rotterdam 1997).
[31] J.L. van Zanden, *De industrialisatie in Amsterdam 1825-1914* (Bergen 1987). Ad Knotter, *Economische transformatie en stedelijke arbeidsmarkt. Amsterdam in de tweede helft van de negentiende eeuw* (Zwolle 1991).
[32] Pim Kooij, 'Artisans and the labour market in Dutch provincial capitals around 1900', in Geoffrey Crossick, *The Artisan and the European Town, 1500-1900* (Aldershot 1997) 239-257.

strategies which were used to extend economic influence in its hinterland.[33] In the cultural field, the number of studies is growing steadily, especially on urban planning and architecture. The pioneer study by Ed Taverne on the extension of Leiden, Haarlem, and Utrecht in the 16th and 17th centuries,[34] has recently been followed by two on Rotterdam,[35] and one on Maastricht.[36] Interesting, too, are the dissertations on political culture in the second half of the 19th century within the Public Works in Rotterdam and Amsterdam, the organisations which designed those cities.[37] Moreover, there are also some contributions on the use of public space.[38] Representation, which is currently very fashionable among cultural historians, is being increasingly incorporated into integral urban studies, about which I will speak in a moment.

Since the beginning of the nineties, there has been a real debate among Dutch urban historians about the nature of urban history. This debate was initiated in 1991 by Harry Jansen of the University of Nijmegen in his theoretical dissertation on the approaches by urban historians. This book has recently been translated into English, which may result in the spread of the debate to other countries.[39] According to Jansen, urban history in the Netherlands is dominated by socio-economic historians, who use a half-open system approach in which cities are studied in relation to their hinterlands and in the context of the urban network system. The relatively closed system approach, in which the city is contrasted with its environment, has been neglected. Still, the closed system offers more opportunities for an integral description of a city. Collective participation, derived from Max Weber, could be a key category to obtain that integration.

Integration is indeed a serious problem. Older city biographies consist of a range of successive articles, sometimes even written by different authors, on different topics which are in no way interrelated. In the last decades of the twentieth century, this treatment has been repeated for all larger Dutch towns by the extremely successful, well-illustrated series *Ach Lieve Tijd* (Those were the days). Fortunately, a number of local authorities wanted a more scientific description of their municipalities and donated large grants to this end. Consequently, in every large city, and in some smaller ones, teams of urban historians were formed to produce urban histories. At the universities of Rotterdam, Utrecht and Leiden,

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[33] B. de Vries, *Electoraat en elite. Sociale structuur en sociale mobiliteit in Amsterdam 1850-1895* (Amsterdam 1986); Diederik Aten, *'Als het gewelt comt…'Politiek en economie in Holland benoorden het IJ* (Hilversum 1995).

[34] Ed Taverne, *In het land van belofte: in de nieue stadt. Ideaal en werkelijkheid van de stadsuitleg in de Republiek 1580-1680* (Maarssen 1978).

[35] Cor Wagenaar, *Welvaartsstaat in wording, De wederopbouw van Rotterdam 1940-1952* (Rotterdam 1992). Hans Bonke, *De kleyne mast van de Hollandse coopsteden. Stadsontwikkeling in Rotterdam 1572-1795* (Amsterdam 1996).

[36] Marijke Martin, *Tussen traditie en vernieuwing. Ruimtelijke transformaties van Maastricht 1650-1795* (Groningen 1997).

[37] J. van den Noort, *Pion of pionier. Rotterdam-gemeentelijke bedrijvigheid in de negentiende eeuw* (Rotterdam 1990). Ida Jager, *Hoofdstad in gebreke. Manoeuvreren met publieke werken in Amsterdam 1851-1901* (Rotterdam 2002).

[38] Heidi de Mare & Anna Vos (eds), *Urban rituals in Italy and the Netherlands* (Assen 1993). Jan Hein Furnée, 'Beschaafd vertier. Standen sekse en ruimtelijke ontwikkeling van Den Haag, 1850-1890' *Tijdschrift voor sociale geschiedenis* 27 (2001) 1-32.

[39] Harry Jansen, *The construction of the urban past. Narrative and system in urban history* (Oxford/New York 2001).

chairs were even created to guide this process. This proved to be a major impulse for integration, since all aspects of city life had to be treated according to the newest scientific insights. As a result, during the last ten years studies have been published, for instance, on Haarlem[40], Dordrecht,[41] 's-Hertogenbosch,[42] Leeuwarden,[43], Rotterdam,[44], and Utrecht,[45] and many more are forthcoming. An urban history, preferably consisting of several volumes, has become a major public relations object for every city that respects itself. An extra advantage of this kind of study is that they also cover the twentieth century. In this way, a historical background is provided for a number of contemporary problems in larger cities, such as de-industrialisation, social intolerance, and congestion.

Considering the results so far available, neither an open nor a closed approach seems to be the key to integral urban history. It is a combination of the two approaches which generates the best results. The books on Leeuwarden and Rotterdam demonstrate this very clearly. Economic development, for instance, is effortlessly linked to representation, which in the case of Leeuwarden is even treated in a very post-modern way. Urban identity is also a major issue in most of the other books mentioned. In almost every chapter, a spatial basis – local, regional, national or international – supports the analyses. Moreover, comparisons are made with other cities, sometimes in neutral terms, sometimes within the context of urban rivalry, which has always been an issue in Dutch historiography.[46]

Thus, we may conclude that Dutch urban history over the last decade has transformed itself from a mainly social and economic discipline into one which covers all societal domains, and that it is no use treating the half-open and relatively-closed approaches as contrasting paradigms. Nor has it been proved that closed pre-modern cities have transformed into open industrial cities, as Oscar Handlin supposed.[47] The political and economic networks of pre-modern cities included the national and political capitals - Amsterdam and The Hague - as well as the outskirts of their hinterlands. And the port cities all had interrelations with cities abroad. But in fact, as recent archaeological excavations have shown, every Dutch town originally had a harbour.

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[40] G.F. van de Ree-Scholtens, et al., *Deugd boven geweld. Een geschiedenis van Haarlem* (Hilversum 1995).
[41] J. van Herwaarden, D. de Boer, F. van Kan, G. Verhoeven, *Geschiedenis van Dordrecht tot 1572* (Hilversum 1996). W. Frijhoff, H. Nusteling, M. Spies (eds.) *Geschiedenis van Dordrecht van 1572 tot 1813* (Hilversum 1998). P. Kooij & V. Sleebe (eds.) *Geschiedenis van Dordrecht van 1813 tot 2000* (Hilversum 2000).
[42] A. Vos et al., *'s-Hertogenbosch. De geschiedenis van een Brabantse stad 1629-1990* (Zwolle 1997).
[43] René Kunst, Goffe Jensma, Paul Th. Kok, Yme Kuiper, Meindert Schroor, Hotso Spanninga, Rolf van der Woude (eds.) *Leeuwarden 750-2000. Hoofdstad van Friesland* (Franeker 1999).
[44] Arie van der Schoor, *Stad in aanwas. Geschiedenis van Rotterdam tot 1813* (Zwolle 1999). Paul van de Laar, *Stad van formaat. Geschiedenis van Rotterdam in de negentiende en twintigste eeuw* (Zwolle 2000).
[45] R.E. de Bruin, P.D 't Hart, A.J. van den Hoven van Genderen, A. Pietersma, J.E.A.L. Struick (eds.) '*Een paradijs vol weelde'. Geschiedenis van de stad Utrecht* (Utrecht 2000).
[46] P.B.M. Blaas & J. van Herwaarden, *Stedelijke naijver* ('s-Gravenhage 1988).
[47] O. Handlin, 'The modern city as a field of historical study', in O. Handlin & J. Burchard, (eds.) *The historian and the city* (Cambridge Mass. 1963) 1-26.

4

The images of Dutch cities in the nineteenth and twentieth centuries.[1]

Introduction

At the beginning of the twentieth century, municipal councils and tourist offices started to promote 'their' cities. An important instrument in this promotion was often a new characterisation of individual cities. Haarlem, for instance, was called the city of flowers, and 's-Hertogenbosch (Bois le Duc) the cheerful market town. The political and economic unification of the Netherlands, which started with the formation of the Kingdom of the Netherlands in 1813, probably induced municipal authorities to distinguish their cities within this national framework. A cultural differentiation went hand-in-hand with economic specialisation, which received an extra impetus during the industrialisation wave at the end of the nineteenth and the beginning of the twentieth century. In this paper I will investigate whether these processes of cultural and economic specialisation are related. A second question concerns the continuity of the city images which were formulated before the nineteenth century. Did they persist, were they incorporated in the new image, or were they replaced by completely new ones? When answering these two questions, a distinction will be drawn between the images formulated inside the city and the images presented by visitors from foreign countries and other parts of the Netherlands.

City images before 1800 by travellers from abroad

Recently, some solid analytical studies have been published about the experiences of travellers from Britain, Germany and France who visited the Netherlands in the early modern period.[2] One survey, published in 1936, points out that most of these travel accounts were written by visitors from these three countries.[3] Of the 303 journals known at that time, written between 1648 and 1850, 105 were written by Germans, 78 by Britons, and 61 by Frenchmen. Almost all of them visited the most urbanised western part of the country. Occa-

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[1] Published in Roman Czaja (ed.) *Das Bild und die Wahrnemung der Stadt und der städtischen Gesellschaft im Hanseraum im Mittelalter und der frühen Neuzeit* (Torun 2004) 259-277.

[2] C.D. van Strien, *British travellers in Holland during the Stuart period. Edward Browne and John Locke as tourists in the United Provinces* (Leiden 1993); Anja Chales de Beaulieu, *Deutsche Reisende in den Niederlanden. Das Bild eines Nachtbarn zwischen 1648 und 1795* (Frankfurt am Main 1995); Madeleine van Strien-Chardonneau, *Le voyage de Hollande: récits de voyageurs français dans les Provinces-Unies, 1748-1795* (Oxford 1994).

[3] J.N. Jacobsen Jensen, *Reizigers te Amsterdam. Beschrijvende lijst van reizen in Nederland door Vreemdelingen* (Amsterdam 1936). This list also contains journals by people who did not visit Amsterdam. The national differentiation was made by Chales de Beaulieu, *Reisende in den Niederlanden,* 63.

sionally, some of them visited the northern or the southern or eastern parts. The Germans usually visited the eastern part on their way to the west (Nijmegen, Arnhem) while the French entered via the south ('s-Hertogenbosch, Breda, Bergen op Zoom, Vlissingen (Flushing), Middelburg). People from England usually took the boat from Harwich to Den Briel, and later to Hellevoetsluis. From there they travelled by land to The Hague or by boat to Rotterdam.[4]

The main goal of all the travellers was the most urbanised western part of the country. Amsterdam, The Hague, and Rotterdam were the most frequently visited cities. Delft, Leiden, Haarlem, Dordrecht, and Utrecht also attracted many visitors, as did the small towns along the Zuiderzee, now the IJsselmeer. Travellers to the north of the country, which was not situated along important entry routes, always visited Leeuwarden and Groningen. Maastricht in the south, at that time a somewhat isolated stronghold, was usually missed by travellers.

Most visitors used the same format for their descriptions, one which still can be found in many contemporary brochures for tourists: a statistical introduction (inhabitants, number of houses), some history linked to the political position in the Dutch Republic, economic activities, and the main buildings, which were often presented in the context of a walk through the city. Since museums at that time were almost non-existent, the cabinets containing the private collections of rich burghers are mentioned. Another attraction were the spinning houses and rasp houses (bridewells) where female and male criminals respectively had to spin wool and rasp wood for the paint industry. Visitors had to pay to see this.

For our purposes, it will be interesting to examine the general opinion of the cities. Most of the time it seems to have been positive. The typically Dutch architecture was always mentioned, as were the canals which reflected the façades of the houses and monuments. Visitors were primarily impressed by the whole rather than the individual monuments.

Sometimes visitors from abroad characterised a Dutch city in a way which became a kind of stereotype. Amsterdam was often called the Venice of the North; a characterisation by a German visitor, 'Pearl of all cities in the world' (Die Perle aller Städte in der Welt), was not adopted by others.[5] The Hague was always characterised as a beautiful village, although it had more than 40,000 inhabitants in the eighteenth century. This was because it had no fortifications, and only received city rights in 1811, from Napoleon. French visitors often characterised The Hague, the seat of the Dutch government, as elegant.[6] It was indeed the most 'French' city in the Netherlands because of the presence of international diplomats. Rotterdam was sometimes called little London by Englishmen who went there, not because of resemblances in economic activity but because of the numerous Scottish and English families who lived there and continued to

[4] Van Strien, *British travellers*, 71.
[5] Chales de Beaulieu, *Reisende in den Niederlanden*, 77.
[6] Van Strien-Chardonneau, *Voyage de Hollande*, 236.

wear the clothes of their homelands.[7]

Almost all visitors praised the cleanliness of Dutch cities, although this scrubbing and polishing was sometimes considered exaggerated. Zaandam was considered to be the cleanest town.[8] The village of Broek in Waterland, north of Amsterdam, was an icon of cleanliness which every foreigner wanted to visit. Amsterdam was also considered very clean. Some visitors, however, complained of the smell of the canals, which were used as open sewers. A number of French visitors called Rotterdam the most pleasant city in the Netherlands. This was because of the presence of broad canals in the sixteenth-century extension to the city, which was called the water town.[9] These canals were connected with the rivers, which enabled the inhabitants to embark in front of their houses and warehouses. Moreover, this system of running water prevented the smells which affected other large cities. 's-Hertogenbosch in the south, one of the least typically Dutch of the larger cities, was stigmatised by German visitors as very dirty.[10] In general, there was less appreciation for cities outside the province of Holland, with the exception of Utrecht which was sometimes called one of the fairest places in the Low Countries.[11]

Travel accounts were also written by foreign students who visited universities for longer periods of time. Many German students, for instance, studied at Leiden and Utrecht.[12] These accounts usually concentrate on one city, which makes them more 'in depth' than those of visitors who left again the same day. Leiden, where the woollen industry was declining in the eighteenth century, was characterised as a quiet, sober town. However, the best and most specific information in these student accounts concerns the university itself, especially the quality of the professors.

Another special group of travellers were people interested in fortifications. The large examples in the south, at Breda, Bergen op Zoom, and 's-Hertogenbosch in particular, attracted many visitors. The fortifications of Bergen op Zoom, designed by Menno van Coehoorn, were popular with French visitors because this town had been captured by the French in 1747 during the war of Austrian succession.

There is a lot of duplication in the travel accounts. Most visitors brought a guidebook from their homelands with them, such as Guicciardini's Description de tout le Pais-Bas (1567) or Diderot's Voyage en Hollande (1773), and copied that tour. This makes it rather easy to separate the original observations from repeated ones. However, this duplication is also an indication that there was a lot

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[7] Van Strien, *British travellers in Holland*, 72.
[8] In Zaandam, tourists always visited the small house where the Russian emperor Peter the Great lived in 1697, when he worked at a shipyard.
[9] Hans Bonke, *De kleyne mast van de Hollandse coopsteden. Stadsontwikkeling in Rotterdam 1572-1795* (Amsterdam 1996).
[10] Chales de Beaulieu, *Reisende in den Niederlanden*, 139-146.
[11] Van Strien, *British travellers in Holland*, 114.
[12] Chales de Beaulieu, *Reisende in den Niederlanden*, 167-178.

of unanimity in the evaluation of Dutch cities.

It can thus be concluded that all foreign visitors were rather positive about Dutch cities, especially those in the west. In their view, the wealth of the country and of the individual cities was reflected by the well-maintained, clean buildings. Visitors from abroad were primarily charmed by the overall impression, because in their opinion there were hardly any monuments comparable to those in their home countries. Haarlem, for instance, according to foreign observers, had only one monument, the cathedral.[13] Only the town hall of Amsterdam was considered to be a monument of international standing. Later, there was admiration for the way that water was integrated in the cities, and for the windmills, which radiated industriousness.

The self image of some Dutch cities in pre-modern times

Let us now examine the ideas that the inhabitants of some cities visited by foreigners formulated about their own cities. Unfortunately, research so far into the self image of cities in early modern times has only been performed for a small number of cities. It is only very recently that urban identity or the image of cities has attracted the attention of urban historians. Scientific histories of individual cities, however, published in the last few years, always include this aspect.

Some cities, Amsterdam, Rotterdam and Dordrecht are important examples, were promoted as commercial cities.[14] A Rotterdam inhabitant in the seventeenth century called Rotterdam the mizzen mast of the Dutch merchant towns.[15] The main mast of course was Amsterdam. Coopstad (commercial town) was also the epithet the Rotterdam ruling elite used for their city. This was also the case in Dordrecht, which demonstrates that urban magistrates, who were generally important merchants, used their own activities to characterise their cities. This connection with the harbour was also expressed by the lower levels of society, which had to do with the mutual dependency of the upper and lower social classes, because the greater part of the lower levels worked in the harbours. Later on, the inhabitants of Dordrecht expressed pride in their position as the first town in the Netherlands with the privilege of a vote in the Estates General. Foreign visitors also often mentioned this aspect.

Corporate identity has been studied thoroughly in Leeuwarden.[16] In spite of a rather large social distance, all the inhabitants felt part of what is called the urban theatre. The court of the Nassau stadtholders was one of the stages of this urban theatre. This court gave the town a status second only to The Hague. Because of the peripheral location of Leeuwarden, this town was less frequent visited by foreigners.

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[13] Van Strien-Chardonneau, *Voyage en Hollande*, 277; Van Strien, *British travellers in Holland*, 121.

[14] A. van der Schoor, *Stad in aanwas. Geschiedenis van Rotterdam tot 1813* (Zwolle 1999). W. Frijhoff, H. Nusteling, M. Spies (eds.) *Geschiedenis van Dordrecht van 1572 tot 1813* (Hilversum 1998).

[15] Bonke, *Kleyne mast*, 68.

[16] Goffe Jensma, 'Het theater Leeuwarden', in R. Kunst et al., *Leeuwarden 750-2000. Hoofdstad van Friesland* (Franeker 1999) 202-232.

Spuipoort in Dordrecht (source: Blink, *Tussen Eems en Schelde*, 1903)

This relative neglect was also felt by the city of Groningen, a flourishing commercial and university town, twice the size of Leeuwarden. The inhabitants of Groningen expressed their pride in possessing large parts of the province, where peat was cut.[17] The Groningen elite in early modern times developed a specific civic pride based on a feeling of superiority towards the provincial nobility. These nobles, living in the province in large fortified houses, more or less acknowledged this bourgeois attitude by moving to the city of Groningen in winter, and by imitating that culture. The large farmers also imitated that culture. In the countryside, they were rather successful at overruling the nobility thanks to a special organisation of property rights. This turned Groningen into a centre where burgher values were very clearly formulated.

A recently published urban history of Utrecht has been titled *Een paradijs van weelde* – a paradise of affluence. This was the characterisation by the famous Dutch poet Joost van den Vondel (1587-1679). Until 1528, the city and province of Utrecht had been governed by a bishop, but in that year Emperor Charles V took over. Utrecht was transformed into a Hapsburg fortification by an Italian architect, Donato de Boni Pellizuoli.[18] Utrecht was considered to be an important city by the Hapsburgs. Both Charles V and Philip II made triumphal

[17] This happened after 1594 when Groningen again joined the Dutch Republic. The city bought large sections of the monastic holdings confiscated by the province.

[18] A.H.M. van Schaik, 'Een nieuwe heer en een andere leer', in R. de Bruin et al., *Een paradijs vol weelde. Geschiedenis van de stad Utrecht* (Utrecht 2000) 191-251, 197.

entrées (*blijde incomste*) and a meeting of the knights of the order of the Golden Fleece was held there. In 1576 Utrecht joined the Dutch revolt against Spain, and became a part of the Dutch Republic, which was founded in 1579 in Utrecht. There were several vehement conflicts between orthodox Calvinists and Catholics, which lasted for decades and ended in a kind of fragile coexistence. Nevertheless, the city was successful in maintaining its old grandeur. This was reinforced by the founding of a university in 1636, the negotiations on the peace of Utrecht in 1714, which for more than a year almost turned Utrecht into a French city, and the settlement of many rich and noble people.[19] These new inhabitants built opulent houses which masked, at least for foreign visitors, the economic decay of the eighteenth century. In 1807, King Louis Napoleon lived there for a time, but after a few months he moved his residence to Amsterdam.

Interesting is the case of 's-Hertogenbosch, a city which as we have seen was not greatly appreciated by foreign visitors. This town, the capital of the province of North Brabant, was taken in 1629 by Frederik Hendrik and was therefore one of the last larger cities to be added to the Dutch Republic. Brabant did not receive the sovereignty which other provinces had, and was ruled directly from The Hague by the Estates General. 's-Hertogenbosch became in some respects a colonial city. The dominant Catholic religion was forbidden and a revered statue of the Virgin in the cathedral was removed.[20] The city ended up with a split personality. Although old Catholic habits were mocked by the Protestant authorities and vicars, one section of the population did their best to keep them alive. The discrepancies in the town were made worse by the immense fortifications, which trapped the factions inside. It is possible that foreign visitors were struck by this depressing atmosphere, which was only partly physical.

It is as yet too early to draw any conclusions because they would only be based on a few observations. Nevertheless, we can conclude that the self image of Dutch towns was in a state of flux in early modern times. Songs of praise from the end of the Middle Ages have survived for every city.[21] They tend to exaggerate, with parts which are rather impersonal, applicable to every city. Between 1500 and 1800, the characterisations seem to become a little more specific, with a clear link to the traits of individual cities. But this difference is very slight. From this period there are also many quotes from city authorities, characterising their city as one of the wealthiest, one of the most beautiful, and one of the cleanest of them all. In fact, the Dutch word for beautiful is the same as the word for clean: *schoon*.

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[19] D.E.A. Faber and R.N.J. Rommes, 'Op weg naar stabiliteit', in: *Een paradijs vol weelde*, 251-315, 301.
[20] A. Vos et al., *'s-Hertogenbosch. De geschiedenis van een Brabantse stad 1629-1990* (Zwolle 1997).
[21] The earliest one known is from Haarlem 1483. G.F. van der Ree-Scholtens et al., *Deugd boven geweld. Een geschiedenis van Haarlem* (Hilversum 1995) 100.

The nineteenth century, Dutch cities seen by foreign and Dutch visitors

As for the early modern period, no systematic research has as yet been conducted into the accounts of foreign visitors in the nineteenth and early twentieth centuries. There are, however, some travelogues which were well known in the Netherlands and abroad, and which were reprinted and translated many times. The most famous is *Olanda* by Edmondo de Amicis, an Italian globetrotter who visited the Netherlands in 1873. It has had numerous reprints and was also translated into English and Dutch.[22]

A second well-known foreign writer was Henry Havard from Paris. He fled Paris in 1871 because of his role in the Commune revolt. Although he eventually went back to Paris, he returned many times to the Netherlands. Travelling had become much easier thanks to the train. During his rather short visit, De Amicis succeeded in covering the whole country with the exception of the provinces of North Brabant and Limburg. Havard travelled in one part of the country during each visit.[23] As a result, his books have much more detail and also contain descriptions of the countryside. De Amicis is also very positive about the countryside.

I think that this interest in the world outside the cities is a new element in travel accounts. Previous generations of travellers generally just passed through the countryside to reach another city. At best, their interest in the countryside was confined to the cultivated part of it. But now it was the more natural part which was being admired. De Amicis, for instance, went to the beach at Scheveningen near The Hague. His predecessors had avoided such raw, uncivilised areas.

This attention to the countryside and for nature was just one important difference with older travel accounts. This new attention was accompanied by a lessening of interest in economic activities in cities, which had been an important item in older travel accounts. Of course, this could be a quite accidental lack of interest on the part of these two travellers. However, it can also be found in the books of other contemporary visitors from abroad. Moreover, this habit of skipping harbours, factories, and other economic centres was also adopted by Dutch travellers at the end of the nineteenth century.

Until that time, industry had been an integral part of Dutch travelogues. Van Hogendorp and Van Lennep, for instance, two students who crossed the country in 1823, frequently mentioned new factories. They linked the beauty of the cities with economic activity. Deventer, for instance, was considered an ugly de-

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[22] Edmondo de Amicis, *Olanda*, 1873. The first translation in Dutch was published in 1876. I have used Edmondo de Amicis, *Nederland en zijn bewoners* (Utrecht/Antwerp 1985).

[23] Cf. Henry Havard, *La Hollande pittoresque : les frontières menacées : voyage dans les provinces de Frise, Groningen, Gueldre et Limbourg* (Paris 1876); Henry Havard, *La Hollande pittoresque. Le coeur du pays : voyage dans la Hollande méridionale, la Zélande et le Brabant* (Paris 1878); Henry Havard, *La Hollande pittoresque : voyage aux villes mortes du Zuiderzée* (Paris 1880).

clining town because of the absence of new economic activities at that time.[24]

The vicar Craandijk, who published very popular travelogues in around 1870, reprinted many times, mentions factories, harbours and other economic sites as an integral part of the landscape.[25] Twenty-five years later, however, this had changed. The four volumes of *Van Eems tot Schelde*, the most generally accepted survey of the beauty of the Netherlands, only contain descriptions of beautiful towns and villages and, for the greater part, impressive landscapes.[26] The author, H. Blink, was a leading economic geographer who had published many studies on regional and local economic development. Industry now seems to have become something else, no longer a part of the beauty of the countryside. In fact, industrialisation by the end of the nineteenth century had became so widespread that it was regarded as a threat to the beauty of the countryside.[27] Since industrialisation in the Netherlands was mainly situated in the cities, some authors even removed those cities from their travelogues and concentrated on the countryside.

In the period around 1900, nature was becoming increasingly considered under threat by the rise of industry and the expansion of cities. Many societies were founded to protect the last remnants of unspoiled nature, among them *Vogelbescherming* (the Society for the Protection of Birds) in 1899, *Staatbosbeheer* (the Forestry Commission of the Dutch government) in 1899, and *Natuurmonumenten* (the Society for the Protection of Monuments of Nature), founded in 1905, which started to purchase valuable natural areas. The General Dutch Cycle Union (ANWB), founded in 1883, was very active in promoting tourism in the countryside, for instance by erecting signposts and publishing guides. There were comparable developments in the cities. *De Bond Heemschut* (1911) (the Society to protect Monuments of Culture) started to pay attention to monuments and beautiful townscapes and mobilised people to protect them. *Heemschut* was a private society. The central government also showed its interest in monuments by the creation of a commission in 1903.

The new attitude towards nature, caused by excessive industrialisation, primarily threatened the positive image of industrial cities. Of course, this was seen as a great problem. The administrators of those cities also wanted to attract tourists. Moreover, wealthy inhabitants were starting to leave the cities and settle in rural areas. One of their answers was to commission prestigious expansion plans, but as we will see below, this was only partly successful. The negative image particularly affected the industrialised cities in the west, which had been so admired

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[24] Elisabeth Kluit, *Nederland in den goeden ouden tijd. Zijnde het dagboek van hunne reis te voet, per trekschuit en per diligence van Jacob van Lennep en zijn vriend Dirk van Hogendorp door de Noord-Nederlandse provintieën in den jare 1823* (Haarlem 1942).

[25] J.G. Craandijk & P.A. Schipperus, *Wandelingen door Nederland met pen en potlood*, 7 volumes (Haarlem 1875-1884).

[26] H. Blink, *Van Eems tot Schelde. Wandelingen door oud en nieuw Nederland , 4 volumes* (Amsterdam 1902/1906).

[27] Pim Kooij, 'Het landschap en de industriële samenleving', in *Uit sympathie. Vijftien opstellen, aangeboden aan Taco Kastelein* (Groningen 1989) 39-53.

Delft around 1840 (source: *Nederland vóór honderd jaar 1859-1959*)

in previous centuries. Cities outside the province of Holland, like Arnhem and Nijmegen, which had once been considered hardly worth visiting, now proved to be pleasant places to settle or to visit because of their green, natural surroundings.

Therefore, the industrial cities had to make efforts to change their images and advertise themselves in a more attractive way. In the next section we will see how this worked out.

Image building in Dutch cities around 1900

Amsterdam was very active in image building and tried to highlight its best features. Since the opening of the railway to Utrecht in 1845, many wealthy inhabitants had left the city to settle in the countryside to the south, where villages like Baarn, now accessible by train, were transformed into representative villa villages.[28] To keep these important taxpayers, the expansion of Amsterdam was mainly planned for the elite. A new semicircle was planned around the city, to be filled with houses for the well-to-do. However, due to financial problems and the reluctance of the elite, some of whom did not want to leave their houses along the canals, only part of the plans was realised. These parts included the

[28] G.A. Hoekveld, *Baarn. Schets van de ontwikkeling van een villadorp* (Baarn 1964).

Vondelpark with its adjacent villas, constructed by a private company with shareholders, the *Plantage* in the east, and parts of the Sarphati plan in the southeast. Other parts of the ring were occupied by industry, for instance by the Heineken brewery, and by quarters for labourers, the so-called Pijp (pipe), with small, tall, multifamily houses.[29]

Apart from this promotion as a residential city, the Amsterdam municipality also felt the need for new industries. As a result of the agrarian depression (1878-1895), many people from the countryside had migrated to the big cities. Initially, demand for labour in Amsterdam surpassed supply, but this soon changed.[30] In this liberal era, even though the liberals in Amsterdam became rather radical, the municipality could not play an active role in attracting industries. They had to confine themselves to reducing the legal obstacles to the establishment of enterprises, and for private companies and corporations who wanted to build houses for labourers. Moreover, they were very active in expanding the economic infrastructure of the city and in propaganda on an international scale.

In this propaganda, Amsterdam proclaimed itself as a microcosm of the whole of the Netherlands. The Palace of Industry (*Paleis voor Volksvlijt*) opened in 1864. This was Amsterdam's response to the Crystal Palace, promoted by the businessman, philanthropist and city promoter Dr Samuel Sarphati, and displayed not only products from Amsterdam but from the whole country.

To stress the function of Amsterdam as an attractive residential centre as well as an economic one, and to attract tourists, a number of fairs were organised. The most important was the *Exposition Universelle Coloniale et d'Exportation Générale* in 1883. This was a real world fair organised along the lines of the fairs in London and Paris, with the participation of industries from foreign countries, art exhibitions, and the inevitable colonial section, for the greater part devoted to the Dutch East Indies, which proved to be the biggest success of the exhibition. The exhibition was initiated by a group of Amsterdam businessmen but was firmly supported by the Amsterdam municipality, and eventually by the Dutch government.[31]

In the history of world fairs, this Amsterdam event, with one and a half million visitors, is considered a mediocre one, but it inspired a number of Dutch cities to copy its example on a lesser scale. This was, for instance, the case with Groningen, where an exhibition was organised in 1903 consisting of presentations of Groningen, Dutch and some foreign firms, while the exotic part consisted of a Japanese square. This exhibition attracted 300,000 visitors, including the royal family. Interesting is that the initiative for this exhibition was taken by the director of the Groningen tourist office, who wanted 'to attract people from

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[29] M.F. Wagenaar, *Amsterdam 1876-1914. Economisch herstel, ruimtelijke expansie en de veranderende ordening van het stedelijk grondgebruik* (Amsterdam 1990).
[30] Ad Knotter, *Economische transformatie en stedelijke arbeidsmarkt. Amsterdam in de tweede helft van de negentiende eeuw* (Zwolle 1991) 50.
[31] Ileen Montijn, *Kermis van koophandel. De Amsterdamse wereldtentoonstelling van 1883* (Bussum 1983).

National Flowers Exposition, Haarlem 1910 (collection Noord-Hollands Archief)

Holland and abroad' to his beautiful city.[32]

Tourist offices, the first one in the Netherlands was founded in 1885 in Valkenburg in the province of Limburg, played an increasingly important role in organising this kind of exhibition. This was the case in 1910 in Haarlem, where the national bulb-growing exhibition *Bulbi Cultura*, was organised.[33] This exhibition was also a great success. It attracted 163,000 visitors in two months. Among them were the Queen and Prince Consort, and even an ex-president of the United States, Theodore Roosevelt, who happened to be the 100,000th visitor. With this exhibition, and also their flower parade, an annual event since 1903, the tourist and municipal authorities wanted to propagate the image of Haarlem as the flower city. Haarlem possessed the ideal location for activities connected with this image. There was a city forest, the *Haarlemmerhout,* which was transformed at the same time into a park by the landscape architect L.A. Springer.

Nevertheless, Haarlem in around 1900 was transforming into an industrial city, with the emphasis on the printing industry (for a long time it was claimed that book printing had been invented in Haarlem by Laurens Janszoon Coster), the metal industry and the food and allied products industry (chocolate). Partly as a result of this, most florists left the city for the area to the west, behind the dunes, with the exception of the world-famous firm of Krelage. However, the

[32] Beno Hofman, *In the picture. Van wereldtentoonstelling tot Blue Moon* (Groningen 2001) 7-19.
[33] M. van Vlijmen and W. de Wacht, *De groene stad. Een eeuw openbaar groen in Haarlem* (Wormer 2002) 144.

municipal authorities ignored the industrial character of Haarlem until 1930.[34]

In Rotterdam in around 1900 it was impossible to ignore industry and trade. The city was booming, primarily due to its transfer function, and between 1851 and 1899 the number of inhabitants rose from 86,000 to 309,000, which was accompanied by major expansions and changes in the city centre. Foreign travellers, such as E.V. Harris from Britain, did not like this new Rotterdam: 'Rotterdam, it should be said at once, is not a pleasant city. It must be approached as a centre of commerce and maritime industry, or not at all'.[35] But even Rotterdam inhabitants expressed their disapproval of the disappearance of the proud and beautiful *coopstad* and its transformation into something resembling Manchester.[36] Culture was subordinate to economic interests and it was only thanks to a couple of isolated Maecenases with old money that the Historical Museum and the Museum Boymans van Beuningen could be founded. The majority of the old elite left the city.

In the period between the two world wars, the negative image changed into a somewhat more positive one. W.G. Witteveen drew up a master plan for the existing city and new extensions which was intended to reduce the chaos in the infrastructure and buildings, and to restore the equilibrium between harbour and city.[37] Although many building activities were performed in a traditional style, Rotterdam also became a place where modernists could present their visions. For instance, Dudok built a modern exclusive department store, *De Bijenkorf*, which together with other shops attracted many visitors from other places. So, too, did the new tunnel under the river. Moreover, the socialist party had gained a majority in the municipal council and promoted cultural institutions to emancipate the labourers. This, among other things, resulted in a new museum and the founding of a philharmonic orchestra, while large modern cinemas were also built. As a result, the image of a *werkstad,* which Rotterdam kept, acquired a more positive emphasis.

The old elite which left Rotterdam generally moved to The Hague. There, real estate developers built a number of villa quarters on the sandy soil between The Hague and Scheveningen, which was now considered to be a healthy location.[38] Although The Hague also had large factories, especially for metal, they were concentrated out of sight in the peat area to the west. Thus the city succeeded in keeping its image as a prestigious and attractive residential centre. Most of those who returned successfully from the Dutch East Indies settled there. The Hague was considered the city with the most exclusive shops, including a Passage, and famous Dutch authors like Louis Couperus described The

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[34] Boudien de Vries, 'Stad in beweging', in Van der Ree-Scholtens, *Deugd boven geweld*, 490.
[35] E.V. Lucas, *A wanderer in Holland* (London 1905) 3.
[36] Paul van de Laar, *Stad van formaat. Geschiedenis van Rotterdam in de negentiende en twintigste eeuw* (Zwolle 2000) 201.
[37] This paragraph is based on Van de Laar, *Stad van formaat*, ch. 10.
[38] Henk Schmal, *Den Haag of 's Gravenhage. De 19e eeuwse gordel, een zone gemodelleerd door zand en veen* (Utrecht 1995).

Hague as a *cité mondaine*, a fashionable city. The royal court, however, did not do much to bolster this image. Ambassadors and foreign visitors reported that the court culture was very boring, especially after Queen Sophie died in 1877. The many clubs, however, were appreciated.[39]

Leeuwarden, the centre of the agricultural province of Friesland, was one of the least industrialised of the larger cities in the Netherlands. Therefore, it will be interesting to see if this resulted in a more positive image. The prerequisites were not very favourable. The French occupation of the Netherlands (1795-1813) ended the existence of the Nassau court in Leeuwarden, which did not return when the Kingdom of the Netherlands was founded. And at the end of the nineteenth century, the agrarian depression affected the market functions of the city. Nevertheless, Leeuwarden did not fall into decay. The upper classes, including the nobility, which had garnered reasonable fortunes from their landed properties in previous times, started to upgrade private as well as public space.[40] The gardens of the court, for instance, were presented to the city by King William I and transformed into a beautiful park, and the link to the Dutch railway system resulted in representative dwelling quarters around the railway stations.

Due to the relative lack of modern economic activity, the social structure did not change very much and remained rather rigid, with much continuity in politics. Many members of the upper classes expressed their civic pride.[41] During the whole nineteenth century and the beginning of the twentieth, they characterised their city as a pleasant, conveniently arranged, open and healthy city. This was partly confirmed by foreign visitors. De Amicis called Leeuwarden a large village and mentioned the smallness of the houses, ignoring the big urban palaces of the nobility along the main canal. He paid more attention to the young Friesian women, still wearing their traditional costume.[42] Lucas, who visited Leeuwarden about 30 years later, knew of De Amicis's description and copied him: 'Leeuwarden is large and prosperous and healthy. What one misses in it is any sense of intimate cosiness'.[43] Like De Amicis, he expressed his feeling of being further from home than in any other town, and he describes the Friesian women. New, however, is that he quotes half a page from a brochure by 'a patriotic society known as the 'Vereeniging tot bevordering van vreemdelingenverkeer'', the Dutch name for the tourist office.

Utrecht at the end of the nineteenth century had a split personality. It was promoted as an attractive residential city by the authorities. By 1820 the walls were being removed because fortifications at some distance from the city had taken over their defensive function. The cleared soil to the east of the city was used for the creation of parks and villa quarters for the well-to-do. In the centre,

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[39] P.R.D. Stokvis, *De wording van modern Den Haag* (Zwolle 1987) ch.10.
[40] Yme Kuiper, 'Burgerlijk zelfbeeld van het 19de eeuwse Leeuwarden', in Kunst et al., *Leeuwarden*, ch.13.
[41] Kuiper, 'Burgerlijk zelfbeeld', 330-345
[42] De Amicis, *Nederland en zijn bewoners*, 267-276.
[43] Lucas, *Wanderer in Holland*, 236.

the city government created cultural institutions like a museum (1838), followed by a music hall (1845).[44] In the south, however, a huge railway junction had been taking shape since 1842, the largest in the Netherlands, while in the west an industrial area was developed, dominated by the metal industry.[45] The restoration of the Episcopal hierarchy in 1853 made Utrecht the most important centre of Catholicism, and promoted the visibility of Catholicism in the city centre. The first department store in the Netherlands had been founded in the centre in 1839, followed by other large and specialised shops.

De Amicis did not notice any of this. When he visited Utrecht in 1873 he saw a town with an important past in decay, as sad and serious as Leiden. Even the church was mutilated, as a result of the destruction of the central part by a storm in 1674, and what was left looked like the House of Commons, because of the many benches.[46]

For the inhabitants of the surrounding area, in around 1900 Utrecht primarily had the image of an attractive shopping centre, easily accessible by train and tram. This commercial element was raised to a national scale by the founding of the annual fair in 1917. This private organisation was supported by the city government and was promoted all over the country. In years to come it would occupy a large area around the railway station, and stress the function of Utrecht as a centrally located meeting point.[47]

Some interesting research has been produced on 's-Hertogenbosch. As mentioned above, the conquered Brabant area was governed directly by the Estates General. This was experienced by the Brabant population as a kind of colonial administration. In 1813, however, North Brabant, as it was now called, became a fully fledged province of the Kingdom of the Netherlands, with 's-Hertogenbosch as its capital. Some emancipation movements were founded in the city, with unusual results. They tried to reintroduce old traditions from the time when 's-Hertogenbosch was an important city in the Duchy of Brabant.[48]. Some people started to wear traditional clothes again, historic parades were held, and 's-Hertogenbosch was promoted as a Catholic city, not partially, as in Utrecht, but generally. De Amicis did not visit this town but Lucas certainly noticed its Catholic character.[49] He also mentioned the superb cathedral of St. Johns with its - returned - statue of the Holy Virgin. In addition, the marketplace was mentioned as 'the most spirited…in the country'. This marketplace was also the subject of a popular Dutch song *Dat gaat naar Den Bosch toe, zoete lieve Gerritje* (Going to Bois le Duc, sweet Gerritje). Although 's-Hertogenbosch

[44] R.E. de Bruin, 'Regenten en revolutionairen', in *Een paradijs vol weelde*, 315-375.
[45] T.H.G. Verhoeven, 'Stedelijk leven in een stroomversnelling', in *Een paradijs vol weelde*, 375-435.
[46] De Amicis, *Nederland en zijn bewoners*, 200.
[47] Floribert Baudet, *Utrecht in bedrijf. De economische ontwikkeling van stad en regio en de Kamer van Koophandel* (Utrecht 2002).
[48] Gerard Rooijakkers, 'De verbeelding van een stad. 's-Hertogenbosch als een woud van symbolen', in Vos, *'s-Hertogenbosch*, 405-421.
[49] Lucas, *Wanderer in Holland*, 279.

had important industries, especially printing, shoes, and cigars, in the rest of the Netherlands the image of the city primarily consisted of the aspects mentioned above, and the famous *Bosse bollen,* huge choux pastry filled with whipped cream and covered with chocolate. There were also other cities which produced delicacies which were famous all over the country, such as *Arnhemse meisjes* (Arnhem girls), a kind of biscuit, and the *vlaai* (fruit flan) from Maastricht.

Within the scope of this paper, it has been impossible to deal with the images of all major Dutch cities. I had to choose just a few to be able to highlight the images of different types of cities. What has become clear is that in the last quarter of the nineteenth century, the way in which the images of cities were formulated changed, from the inside as well as from the outside. In early modern times the wealth of the cities was praised by foreign visitors as well as by the inhabitants. And the sources of this wealth - harbours, markets, factories - were visited. After about 1875, the wealth of cities was still promoted but the industrial base was ignored by visitors. Urban wealth was primarily associated with exclusive shops, and the ability to keep the urban monuments in good shape. And the municipal administrators did not advertise their cities as industrial centres but as pleasant places to live. In this promotion they stressed cultural characteristics, like museums, monuments, and parks. By doing so, they proved to be influenced by tourist offices. The same was the case when promoting the pleasant surroundings of their individual city. This was a result of the increased interest in nature. Therefore, at the end of the nineteenth and the beginning of the twentieth century, Dutch cities were denying that they had become industrialised.

5

'Where the action is'. The introduction and acceptance of infrastructural innovations in Dutch cities 1850–1950.[1]

Introduction

Industrialisation in the Netherlands started in the latter half of the nineteenth century. It was firstly an urban phenomenon that mainly manifested itself in existing towns and cities - Amsterdam, Rotterdam, the Hague, Utrecht, Groningen, Haarlem, Leiden, Dordrecht, Maastricht, Delft, Schiedam, Deventer and so on. New industrial centres emerged only in a few cases, such as the textile cities of Enschede and Tilburg and the Philips city Eindhoven, in the early twentieth century. Therefore, the urban hierarchy in the Netherlands did not change much under the influence of industrialisation.[2] The top of the Dutch hierarchy consisted of three cities with more or less complementary functions - Amsterdam was the financial centre and the centre for colonial trade, Rotterdam was the centre for the transit trade with Germany and the United Kingdom, while the Hague was the political centre. All three cities acquired additional industrial functions, especially in the fields of shipbuilding and other metal industries.

Below the top were a number of second rank cities in the west of the country, including Dordrecht, Delft and Haarlem, which had limited service areas and became important industrial centres. In the north the cities of Groningen and to a lesser extent Leeuwarden combined their positions as regional capitals with additional industrial functions - Groningen in printing, metal (bicycles), food (sugar, coffee and tobacco), and ready-made clothing, and Leeuwarden in dairy-related food products. Maastricht in the south also enjoyed a similar double position, but other regional or provincial capitals in the east, north-east and south – Assen, Zwolle, Arnhem, 's-Hertogenbosch (Bois le Duc) and Middelburg – did not manage to acquire many industrial functions. However, industrialisation was an enormous stimulus for urbanisation in all cases. In 1800, 24.5 percent of the Dutch population lived in cities with 20,000 inhabitants and over. In 1900 this percentage had increased to 39.3.[3]

This process of urbanisation was accompanied by the introduction of new infrastructural facilities such as gas plants, power stations and tramways, and also new newspapers, cinemas and restaurants. It can also be assumed that innovations

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[1] Paper presented to the World Economic History Conference, Helsinki, August 2006.

[2] P. Kooij, 'Urbanization. What's in a name, in H. Schmal (ed.) *Patterns of European urbanization* (London 1981) 33-59. See also this volume.

[3] P. Kooij, 'Stad en platteland', in F.L. van Holthoon, *De Nederlandse samenleving sinds 1815* (Assen/Maastricht 1985) 93-119, Table 1.

such as cigarettes, bicycles, cars and ready-made clothing were introduced at the top end of the urban hierarchy and from there percolated to the lower classes, as Hägerstrand has already put forward in his diffusion theory.[4] In addition to this space-bound theory of innovation, there are also time-bound ones that distinguish successive stages, such as the theories of Rogers and Lazer and Bell.[5] The stages are:

1. Invention
2. Introduction (first consumption by innovators)
3. Acceptance (by early adopters)
4. Adoption (product turns from new to familiar)
5. Assimilation (product has become indispensable)

In this contribution I will analyse the introduction of a set of innovations from a space-time perspective, to try to determine whether the urban hierarchy indeed played a distinctive role in the dissemination of innovations. The products chosen are the bicycle, the motor car, gas and electricity, the department store, and the cinema. All these innovations and many more are collected in the pioneering study by Han Baudet on 100 years of innovation in the Netherlands.[6] I was involved in that project. All the products selected here refer to economic and social urban and rural infrastructure. The car, for instance, was used in trade and transport but was also a vehicle of conspicuous consumption, while the bicycle was used to commute but also for recreation. Only the cinema belonged more exclusively to the cultural domain.

The dissemination of the bicycle

The velocipede was introduced in the Netherlands in 1867 from London. The modern bicycle, the Rover, was imported in 1885, again from the United Kingdom. The early adopters used the velocipede as a substitute for a horse in a sports context. There were many bicycle races in urban parks on lanes which until then had been used by coaches. The Rover and similar bicycles, which were called 'safety' bicycles, served different goals. They were used by members of the bourgeoisie for household-related trips and also to explore the surrounding nature, which at that time become a fashionable activity for city dwellers. In fact this stimulated two contradictory movements: from the suburbs to the city centre and from the city centre to the countryside.

Although the first bicycles were introduced in Amsterdam, dissemination took a different path. In some places local smiths were very successful in imitating the British examples. The first Dutch bicycle factory was founded in 1869 in

[4] Torsten Hägerstrand, *Innovation diffusion as a spatial process* (Chicago 1967).
[5] Everett M. Rogers, *Diffusion of innovation* (New York 1986); W. Lazer & W.E. Bell, 'The communication process and innovation', in *Journal of Advertising Research*, vol. 6 (Sept. 1966).
[6] H. Baudet, *Een vertrouwde wereld. 100 jaar innovatie in Nederland* (Amsterdam 1986).

Deventer by Hendrik Burgers, other successful factories were located in Dieren near Arnhem (Gazelle) and in Groningen (Fongers). Even as early as 1910, ten percent of the Dutch population owned a bicycle. By 1939 this percentage had already reached 43 percent.

The Fongers bicycle factory in Groningen (source: *Groningen 1913)*

Thanks to the tax on bicycles, it should be possible to trace their dissemination spatially.[7] So far, however, no one has performed any research on this subject, though we have conducted a survey of the first bicycle clubs in the Netherlands. These clubs were founded by male members of the elite and can be regarded as offshoots of other sports clubs, such as in the fields of cricket and football.[8] The first was founded in 1871 in Deventer, which was indeed the pio-

[7] From 1898 a tax on bicycles was incorporated into the so-called personal tax. In 1924 a separate bicycle tax was promulgated. Ferdinand H.M. Grapperhaus, *Over de loden last van het koperen fietsplaatje. De Nederlandse rijwielbelasting 1924-1941* (Deventer 2005).

[8] J.M. Fuchs & W.J. Simons, *Voort in 't zadel, kameraden. Honderd jaar fietsen in Nederland* (Amsterdam 1971) 40.

neering city for bicycles. In 1872 clubs were founded in Apeldoorn – which was very near Deventer – and Rotterdam. In 1875 a club was founded in Leeuwarden, the capital of the province of Friesland, and in 1880 a second was founded in Apeldoorn, followed a year later by Zutphen, which was also near Apeldoorn and Deventer. Events then gathered pace – in 1882 clubs were founded in Zwolle, the Hague and Haarlem; in 1883 in Arnhem, Wageningen and Breda; and in 1884 in Amsterdam, Leiden, Baarn, Utrecht, Nijmegen, Amersfoort and Rotterdam.

As we can see, all the clubs were established in cities, since only Baarn could actually be defined as a village, though it was in fact a satellite town of Amsterdam. The early adopters seem to have lived in the cities to the east of the country near the Burgers and – from 1892 – the Gazelle factories, rather than the big cities where the bicycle was introduced. The presence of these factories was a big stimulus. A club was established in Groningen soon after the founding of the Fongers bicycle factory in 1884. The Fongers story also illustrates the specific diffusion pattern of the bicycle. From Groningen, the company opened branches at the top of the urban hierarchy: in Amsterdam, Rotterdam and the Hague, in the provincial capitals Utrecht, Arnhem and Middelburg, and the university city of Leiden.[9] All the branches had a cycle school attached in which women in particular could learn to cycle elegantly before going out on the streets. Women were also soon admitted to the clubs. With a few exceptions, the first cycle tracks were also constructed outside the big cities along highways, especially provincial roads. Stimulus was provided by the General Dutch Cyclists Association, founded in 1883.

The bicycle passed through the five stages of the innovation acceptance model very quickly in the Netherlands. We should now consider whether the car did the same.

The dissemination of the motor car

Thanks to the car tax and the registration number system, it is possible to reconstruct the distribution of the car from its introduction in the Netherlands in 1896. Two cars were sold that year, the first to a photographer in the Hague and the second to a notary in Wieringerwerf,[10] so it was town and countryside from the beginning. In his PhD thesis, Peter-Eloy Staal reconstructed the spatial pattern of this dissemination.[11] Since early registration numbers were differentiated by province (A=Groningen, B=Friesland, D=Drenthe) it was very easy to reconstruct the provincial patterns. All provinces displayed the same S-curve – a slow start in the early twentieth century, acceleration in the 1930s, stagnation around the Second World War, acceleration again in the 1950s, and a boom from

[9] Fuchs & Simons, *Voort in 't zadel*, 21.
[10] Baudet, *Vertrouwde wereld*, 77.
[11] Peter-Eloy Staal, *Automobilisme in Nederland. Een geschiedenis van gebruik, misbruik en nut* (Zutphen 2003) 43-55.

The Fongers garage in Groningen (source: *Groningen 1913*)

the 1960s on, slowing down a little in the 1990s.

Staal starts from Hägerstrand's conclusions. Hägerstrand analysed the introduction of the car in Sweden. He initially discovered that there was high car consumption in the big cities and places that functioned as import centres. However, over the long term a positive correlation between car consumption and low population density manifested itself. This was indeed the case, but not in Amsterdam, as though the largest city supported the largest number of cars, it was the Hague that had the highest car density until 1913. This was related to the role the Hague played as the political capital of the Netherlands. At a time when cars were very expensive, most embassies purchased them as status symbols, as did the members of the Dutch elite who clustered around the royal court. The Crown itself, moreover, despite possessing a golden coach, was also an important consumer of cars, especially the Dutch-made and very expensive 'Spyker'.[12]

It is remarkable that the largest number of cars per inhabitant was to be found in the provinces of Utrecht and Gelderland. The first province contains the city

[12] H.A.M. van Asten, 'De Spyker van de weg gereden', *Economisch- en Sociaal-historisch Jaarboek* 33 (1970) 67-119.

of Utrecht, the fourth largest city in the country; but it was Gelderland that housed one of the most important car importers in the country. The same effect was apparent here as in the case of bicycles. The Hägerstrand thesis of initial surplus in the cities was confirmed, but rural areas did not possess relatively higher cars numbers until after 1976. Interestingly, it has been those municipalities situated near the big cities, such as Haarlemmermeer near Amsterdam, that have boasted of the highest car density since that time. This is also in accordance with Hägerstrand's findings, which points out the quick assimilation of cars in the service areas of large cities.

The introduction of gas and electricity

After a few initial experiments with gas production in a few plants and a few efforts to sell gas in transportable containers, the first real coal gas plant was established in Rotterdam in 1827 by the Imperial Continental Gas Association, which opened gas plants in a number of large European cities including Antwerp, Brussels, Berlin and Vienna, from its headquarters in London. In fact, Amsterdam could already boast of its own plant from 1826, though this plant produced its gas from rapeseed oil. The Imperial Continental Gas Association managed to buy a small plant and in 1834 was granted a concession to produce coal gas.[13] In 1836 Imperial Continental opened a third factory in Haarlem, at that time the sixth largest city in the Netherlands.

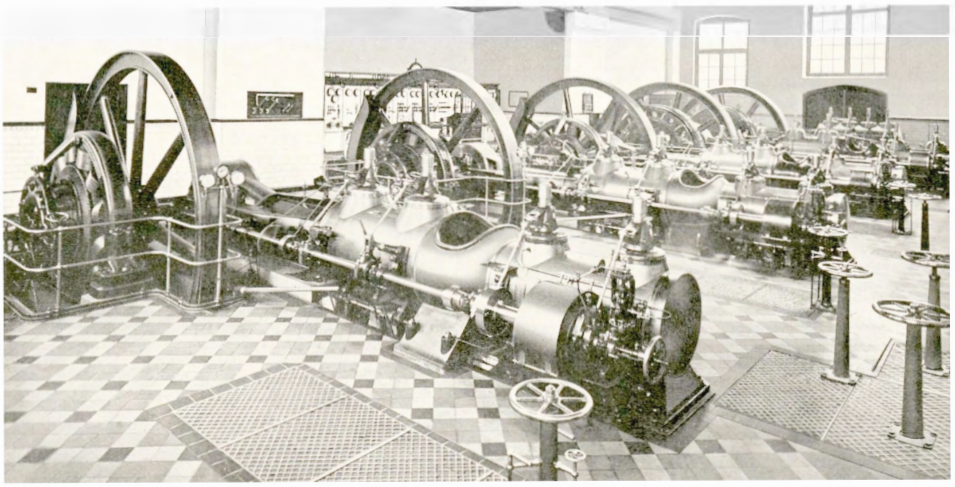
Imperial Continental also tried to obtain a concession for the Hague, but this one was granted to A. van Oven in association with E.E. Goldsmid's firm from Paris in 1844. The plant was opened in 1845. In the meantime, gas plants also opened in Utrecht and Arnhem, founded by John Bryan who had a firm in Newcastle.[14] Bryan also obtained a licence to run a gas plant in Leeuwarden, which he sold to Goldsmid in 1845. Leeuwarden was followed in 1848 by Zwolle and Leiden. The Municipal Council in Leiden decided to build a municipal gas factory. This also occurred in Groningen in 1854.

As Table 1 shows, the spread of gas plants more or less followed the lines of the urban hierarchy, with the largest cities first, followed by a few regional capitals and booming residential and industrial centres. Groningen, and to a lesser extent Maastricht and Nijmegen, appear to be exceptions. In these cities, however, a large number of initiatives were hindered by the central government, who did not permit the introduction of this dangerous innovation in these fortified cities. In Maastricht the local industrialist Petrus Regout was only granted a limited concession because the Crown did not wish to create conditions where an enemy power could deprive a whole city of its energy by blocking the coal supply or turning a tap.

Gas was an immediate success in those large cities. Consequently, smaller pla-

[13] P. Kooij, 'De gasvoorziening in Nederland rond 1880', *Gas, maandblad van de stichting tijdschrift openbare gasvoorziening* 100 (1980) 266-278.

[14] They were run by W. de Heus, who owned a copper mill in Utrecht.



Power plant Groningen (source: *Groningen 1913*)

ces almost all followed suit. Eighty-one gas plants were built between 1856 and 1870, most by private entrepreneurs. In the largest cities the municipal councils tried to take over these profit-generating factories. The early adopters were the proprietors of luxury shops (clothes, wine or chocolate), hotel and restaurant owners, the municipalities themselves (public lightning and public buildings), and medium-sized factories and workshops where gas machines were used (bread, tobacco, coffee and tea). Individual consumption by private persons started very slowly. Members of the elite started to substitute their oil lamps for gas lamps around 1880. The lower orders followed after 1900.[15] However, by that time electricity had proved itself to be a successful alternative.

In contrast to the introduction of gas, the introduction of electricity followed a rather whimsical pattern. The first power station was founded in 1886 in Kinderdijk, a village near Rotterdam. The plan was conceived by Willem Smit, a producer of electrical goods. In the same year Nijmegen opened a municipal power station, only for public lightning. In 1889 Siemens und Halske opened a power station with limited capacity in the Hague. Amsterdam got a private power station in 1892. In 1895 a municipal power station was established in Rotterdam.[16] In the same year Borne, where the electro-technical firm Hofstede Crull & Willink (later Heemaf) was located, got its electricity supply.

After that events took a more rapid course, with power stations opening in Elst, Baarn, Terborg and Beek-Ubbergen in 1898; in Boxtel, Hilversum, Naarden, Bloemendaal, Abcoude and Maarssen in 1899; and in Driebergen, Hengelo, Valkenburg and Watergraafsmeer in 1900. With the exception of the industrial towns of Hengelo and to a certain degree Hilversum, all these were

[15] Kooij, 'Gasvoorziening', 277.
[16] Before 1900 only two municipal power stations were in operation , in Nijmegen and Rotterdam.

quite small places. Most were commuting centres near Amsterdam and Utrecht, where the well-to-do who wanted this innovative power source lived, and some were villages that did not have a gas plant. Moreover, electricity was easy transportable, which enabled neighbouring municipalities to share a single power plant. Most provinces thus eventually took control of the electricity supply to cover their entire area.

It was the presence of gas plants that caused the relatively late adoption of electricity in the large Dutch cities that found themselves below the top of the urban hierarchy. Most municipal councils had only just taken control of their gas plants from private owners, or had made huge investments to build their own plants. Given such recent investment, they did not wish to stimulate the creation of a serious competitor. As a result, power stations were not built in Groningen and Haarlem until 1902, and even later in Utrecht, Arnhem, Leiden and other big cities (Table 5.1).

Despite that, electricity was an immediate success. It permitted the mechanisation of small workshops with electric motors, while in houses and shops it was

Table 5.1. The largest Dutch cities and innovations.

	inhabitants 31 dec. 1900	start gas	start electricity	first cinema	number of cinemas opened before 1920
Amsterdam	520,602	1826	1892	1903	62
Rotterdam	332,185	1827	1895	1903	33
The Hague	212,211	1845	1889	1906	36
Utrecht	104,194	1842	1905	1908	14
Groningen	67,563	1854	1902	1908	9
Haarlem	65,189	1836	1902	1908	8
Arnhem	57,498	1844	1907	1908	6
Leiden	54,421	1848	1907	1908	10
Nijmegen	44,043	1850	1886	1908	7
Tilburg	41,518	1853	1911	1909	8
Dordrecht	38,804	1852	1910	1910	4
Maastricht	34,182	1849	1910	1910	7
Leeuwarden	33,009	1845	1912	1910	2
Delft	31,787	1855	1910	1912	4
's-Hertogenbosch	31,128	1854	1919	1911	3
Zwolle	30,848	1848	1915	1912	4
Apeldoorn	26,738	1863	1923	1917	1
Schiedam	26,716	1857	1913	1912	2
Deventer	26,224	1858	1915	1911	4
Breda	26,156	1858	1918	1910	4

Sources: See notes 13, 17, 25

preferred to gas because it did not create heat and was easy to handle.[17] Public gas lightning was also considered inferior to electric lightning because every lamppost had to be lit separately. In spite of the late adoption in the larger cities, assimilation followed very quickly. Soon after 1900, all larger cities organised electricity exhibitions where they declared themselves electric cities.

The beginning of department stores

Most large retail chains in the nineteenth century were created by labour migrants from Westphalia. Clemens & August Brenninkmeijer (C&A), Johannes Peek & Heinrich Cloppenburg, Anton Kreymborg, Willem Vroom & Anton Dreesmann all came from that area; with the exception of Willem Vroom who originated from Veendam, a small town east of the city of Groningen. C&A, Peek and Cloppenburg, and Kreymborg all established shops stocking ready-made clothing, while Vroom and Dreesmann founded the first very successful Dutch chain of department stores.[18]

Amsterdam, the capital, with its opinion leaders in culture and fashion, was the ultimate goal for these entrepreneurs. There was a hard core of so called Tüötten (hawkers) within this group of labour immigrants from Westphalia. These included Brenninkmeijer, Lampe and Voss - who all originated from four villages in Oberlingen - and Sinkel and Bahlmann, who came from other parts of Westphalia and settled in the Netherlands in the early nineteenth century. Miellet describes their shops as the predecessors of modern retail chains.[19] They started in Amsterdam with small shops and from there founded branches in other cities. Sinkel, who offered a very extensive range, founded branches in Leeuwarden and Leiden - which soon closed - and Rotterdam and Utrecht. He avoided the luxurious Hague, perhaps because his shops catered to the low budget shopper. Bahlmann, who started his career in the Sinkel store, had ten shops, including two big ones in Amsterdam and one in Arnhem.

The Brenninkmeijers, who belonged to the second wave that settled in the late nineteenth century, acted more cautiously. They started in Sneek in the province of Friesland, and from there founded a store in Leeuwarden, the Frisian capital, then moving to Amsterdam. From there they started their expansion all over Europe in 1911, beginning in Berlin. Peek & Cloppenburg moved directly to Amsterdam and from there founded branches in Rotterdam and Groningen, for instance. Kreymborg did the same.[20] The spread of their branches is not very well documented, but fortunately, thanks to Philip Hondelink, we do know ex-

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[17] P. Kooij, 'De eerste verbruikers van electriciteit in de gemeente Groningen, 1895-1912', *Economisch- en Sociaal-Historisch Jaarboek* 35 (1972) 274-302.

[18] H. Ph. Hondelink, 'Vroom en Dreesmann, de oprichters en hun onderneming 1887-1912', *Jaarboek voor de geschiedenis van bedrijf en techniek* 9 (1992) 159-185.

[19] R. Miellet, 'Westfaalse ondernemers en de opkomst van het Nederlandse grootwinkelbedrijf tot circa 1920', *Jaarboek voor de geschiedenis van bedrijf en techniek* 2 (1986) 135-158.

[20] They were imitated by the Groningen brothers Gerzon, who trained in Germany and started a fashion retail chain in Amsterdam.

actly the pattern of the expansion of the Vroom & Dreesmann company.[21]

Anton Dreesmann and Willem Vroom met in Amsterdam, where they were apprentices and later became brothers-in-law. In 1878 they opened their first textiles shop in Amsterdam. Between 1878 and 1892, six other shops in Amsterdam followed. These were existing shops that they took over. Some of these had more variety in the range of products they offered, such as shoes and furniture, which resulted in the firm's slow development from drapery to department stores. The first branch in Rotterdam was opened in 1892, followed the next year by one in the Hague.[22] Now the top of the urban hierarchy was covered. It would be reasonable to expect the next branch to have been in Utrecht, but that city had to wait until 1898. In the meantime, branches were opened in Nijmegen (1895), Arnhem (1896) and Haarlem (1896). Tilburg and 's-Hertogenbosch followed in 1899, and Breda in 1900. The next branches were established in Leeuwarden (1902), Middelburg (1902) and Leiden (1903).

With the opening of the Leiden store, all ten of the largest cities in the Netherlands possessed their V&D, as well as Middelburg - a provincial capital - and Alkmaar (1896) and Dordrecht (1901) which got franchise stores. The only big city without a store was Groningen. An older brother of Willem Vroom, Caspar, had his own store there and Willem did not wish to compete with his family.

Family was very important to these immigrants with most stores being run by members of the two families. All the stores were established under their own limited liability company. In the early twentieth century these companies started to establish branches of their own. 's-Hertogenbosch, for instance, opened branches in Eindhoven and Helmond, while Nijmegen did the same in Venlo and Tiel. The third level of the Dutch urban hierarchy was thus also covered. The pattern of the spread of the Vroom and Dreesmann department stores reflects very well the pattern of the Dutch urban hierarchy. Of course there is the exception of Groningen and a slight over-representation in the south, which the Roman Catholic Westfalians preferred to the Protestant north. Cities with a relatively large number of inhabitants but small and heavily contested service areas, such as Delft and Maastricht, were also the last large cities to get V&D branches, in 1904 and 1907 respectively.

In addition to Vroom and Dreesmann, there was one other chain of department stores: De Bijenkorf. In the nineteenth century this was a fast growing shop in Amsterdam. Its great transformation began in 1912 when an enormous store was opened in the centre of Amsterdam, in front of the royal palace. It was only in 1926 that the Bijenkorf became a chain with the opening of a branch in the Hague, designed by the famous architect Piet Kramer, and in 1930 in Rotterdam, designed by Willem Dudok.[23] Only long after the Second World War did some second rank cities get a Bijenkorf.

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[21] See the appendix in his unpublished Master's thesis 'Vroom en Dreesmann. De oprichters en hun onderneming (University of Groningen, Department of History, 1989).
[22] A second shop was opened in Rotterdam in 1898 and in the Hague in 1903.
[23] Roger Miellet, Marieke Voorn, *Winkelen in weelde. Warenhuizen in West-Europa 1860-2000* (Zutphen 2001).

The Bijenkorf in The Hague 1926 (collection Gemeentearchief Den Haag)

The adoption of the cinema

Dutch cinema started in the 1890s. At that time, a few entrepreneurs such as Christiaan Slicker and Carmine Riozzi ran travelling cinemas.[24] These exuberant palaces were usually located in urban fairs and sometimes also in villages. Electricity was generated by locomotives running on coal and steam. In the early twentieth century the first fixed cinemas emerged, the first one probably being the Flora in Amsterdam in 1903. There was a high correlation with the introduction of electricity.

As Table 5.1 shows, the dissemination of the cinema followed the lines of the urban hierarchy. All the large cities got a cinema in their turn. Only Apeldoorn seems to have been an exception. This was because this was an atypical municipality which combined a large area with an over-representation of high earners, who were partly attracted there by the royal family, which resided there for part of the year at the Palace 't Loo. As we will see below, this was not the cinema owners' target market. Smaller industrial towns like Dordrecht and Delft therefore accepted cinema earlier.

The spatial dissemination of Dutch cinema was reconstructed by Karel Dibbets. He has published an extensive chronology of the introduction of cinemas by city and village on his website, which provides us with a very appropriate data

[24] Karel Dibbets & Frank van der Maden (eds.), *Geschiedenis van de Nederlandse film en bioscoop tot 1914* (Weesp 1986).

Travelling cinema of Jean Desmet in front of the Groningen townhall 1908 (collection RHC Groninger Archieven 1785-7934)

set.[25] This data reveals some interesting characteristics of the introduction of the fixed cinema. Until 1910 they were all located in large cities. Some closed almost immediately but others remained open for decades. In addition to the cities listed in Table 5.1, Enschede (1908), Venlo (1907) Vlissingen (1910) and Gouda (1910) also had cinemas. These were all industrial cities with a large labour force, which suggests that the cinema remained entertainment for the lower classes, as it had been at the fairs.

This is confirmed by the list of other places where the cinema was introduced between 1910 and 1915: Alkmaar, Almelo, Amersfoort, Bergen op Zoom, Boxtel, Bussum, Delfzijl, Eindhoven, Emmen, Heerlen, Helmond, Hilversum, Hoogezand, Hoorn, Meppel, Roosendaal, 's Heerenberg, Sittard, Stadskanaal, Tiel, Veendam, Waalwijk.[26] This is a mixture of places at the sub-top of the urban hierarchy (Alkmaar, Amersfoort, Bergen op Zoom and Hoorn), industrial centres (Boxtel, Eindhoven, Helmond, Hilversum, Roosendaal and Waalwijk) naval centres (Den Helder, Delfzijl and Meppel) and places in typical industrial

[25] See http://www.xs4all.nl/~kd/index.html.
[26] Only the places where there is no doubt about location or date of opening of cinemas are taken into account.

zones – the Groningen/Drenthe peat area (Emmen, Hoogezand, Veendam and Stadskanaal) and the Limburg coal area (Heerlen). Many members of the lower classes were concentrated in the latter areas in particular. It was only in the 1930s that the cinema became acceptable for the bourgeoisie.

Conclusion

The examples noted above show in most cases quite a firm correlation between the structure of the Dutch urban hierarchy and the introduction of infrastructural innovations. This is not surprising. In fact, a city's population is related to its urban functions, including service functions and the size of the service area as important elements. Service functions that had already existed for ages were joined by new ones in the economic, social and cultural domains. Therefore, some deviations from the general pattern that manifested themselves during the introduction and dissemination of the innovations discussed are in fact of much more interest. They show how the image of these innovations, their properties and characteristics, are of great interest in understanding how adoption and assimilation take place. The level in the social structure where the early adopters of a specific innovation are situated is an important catalyst in this context.

6

Migrants in Dutch cities at the end of the nineteenth century.[1]

Two patterns of migration

In the last quarter of the nineteenth century the Dutch cities formed part of two migration circuits. The first one was characterised by stepwise migration according to the third law of Ravenstein.[2] People migrated from small villages to larger ones and small cities, and then sometimes took the last step to the regional capital. This 'vertical' migration circuit was region-bound.

The second migration circuit was linked to the urban network system which connected all regional capitals and the national capital, which in the Netherlands actually consisted of three cities: Amsterdam, The Hague, and Rotterdam.[3] Long distance migration took place along the lines of this urban network system and was therefore more horizontally organised.

Larger cities in the Netherlands therefore linked migration on a regional scale to migration on a national scale. To put it in terms formulated by Hohenberg and Lees, they acted as a gateway between the central place system and the urban network system.[4]

Previously, the ways in which the two migration systems worked has only been analysed for one city: the city of Groningen between 1870 and 1914.[5] Some general observations, however, have been made about other cities: Amsterdam, Rotterdam, Leeuwarden and Dordrecht.[6] Therefore, we have information about migration in two regional capitals: the capitals of the provinces of Groningen and Friesland (Leeuwarden) in the north of the Netherlands, and we know something about migration in two of the national capitals, as well as about Dordrecht, a second-rank city situated near Rotterdam. This information mainly

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[1] From Denis Menjot & Jean-Luc Pinol (eds.) *Les immigrants et la ville. Insertion, integration,discrimination (XIIe-XXe siècles)* (L'Harmattan: Paris 1996) 207-230.

[2] E.G. Ravenstein, 'The laws of migration', *Journal of the Statistical Society* (1885 and 1889).

[3] R. van Engelsdorp Gastelaars and M. Wagenaar, 'The rise of the Randstad 1850-1930', in H. Schmal (ed.) *Patterns of European Urbanization* (London 1981) 229-247.

[4] Paul Hohenberg and Lynn Hollen Lees, *The making of urban Europe, 1000-1950* (Cambridge Mass. 1985) ch. 2.

[5] Pim Kooij, *Groningen 1870-1914. Sociale verandering en economische ontwikkeling in een regionaal centrum* (Assen/Maastricht 1987) ch. 3.

[6] Ad Knotter, *Economische transformatie en stedelijke arbeidsmarkt. Amsterdam in de tweede helft van de negentiende eeuw* (Utrecht 1991); P.J. Bouman and W.H. Bouman, *De groei van de grote werkstad* (Assen 1952); Henk van Dijk, *Rotterdam 1810-1880. Aspecten van een stedelijke samenleving* (Schiedam 1976); Rolf van der Woude, *Leeuwarden 1850-1914. De modernisering van een provinciehoofdstad* (Leeuwarden 1994). Carolien Koopmans, *Dordrecht 1811-1914. Een eeuw demografische en economische geschiedenis* (Hilversum 1992).

concerns the development of the occupational structure and the labour market in relation to migration. Systematic information concerning, for example, living conditions, social mobility, and return migration is only available for Groningen. Therefore, the greater part of this article will be devoted to that regional capital.

Dutch cities and migration

The industrialisation of the Netherlands, which began after 1850, took place chiefly in the cities. The completion of the urban network system, thanks to the coming of the railway and the (re)construction of interregional canals and highways, enabled the cities to specialise in particular industrial products.[7] Therefore, the larger old cities could maintain their positions in the rank-size distribution. Only one new industrial city obtained a high rank: Tilburg in the south developed a large woollen industry. Runners up were Enschede in the east (cotton industry) and Apeldoorn in the centre, which was a producer of paper and also an important residential centre. In 1900 these cities each had about 25,000 inhabitants. After 1900 Eindhoven (electronics) would join the duo. Table 6.1 shows that most cities had a positive migration balance.

Table 6.1. Migration balance of the largest Dutch cities

	inhabitants	1860-1869	1870-1879	1880-1889	1890-1899
Amsterdam	510853	0.9	6.5	12.4	*6.0
Rotterdam	318407	2.6	16.7	14.8	*27.8
The Hague	206022	4.7	13.8	16.7	11.9
Utrecht	102086	6.0	4.5	8.2	1.2
Groningen	66537	3.7	11.5	8.0	4.5
Haarlem	61702	2.2	7.7	18.8	10.7
Arnhem	56812	16.4	14.6	5.1	1.3
Leiden	53657	-4.7	-3.3	-7.5	*8.6
Nijmegen	42755	0.9	2.2	16.2	18.4
Tilburg	40628	17.1	4.5	1.3	0.7
Dordrecht	38386	2.4	4.2	5.9	6.6
Maastricht	34220	-4.8	-6.1	0.6	-5.6
Delft	31589	1.2	6.8	0.4	-5.1
Leeuwarden	31162	-3.4	5.2	-3.0	-4.3
Zwolle	30560	-1.0	1.5	2.9	0.3
's-Hertogenbosch	30517	-1.1	-4.5	0.8	0.9

Source: Census; Annual population statistics individual cities

Explanation: Numbers of inhabitants 1-1-1900 (all cities with 30,000 inhabitants and over are included). Migration balances calculated per thousand (averages of 10 successive years); * = inhabitants of adjacent municipalities included.

[7] Pim Kooij, 'Peripheral Cities and Their Regions in the Dutch Urban System until 1900', *The Journal of Economic History* XLVIII (1988) 357-371.

The harbour city of Rotterdam, which also had a high birth rate, was the fastest grower. But The Hague, which became the bureaucratic centre of the Netherlands, also attracted many immigrants. The high positive migration balance of Nijmegen was caused by the construction of a railway in the seventies, which made Nijmegen an attractive residential centre, a position which before that time was held by Arnhem. This stresses the fact that industrialisation was not the only factor which attracted people. In fact it only prevented cities from too much emigration. Haarlem was the only exception to this general rule. The large metal industry in that city was an important pull factor. As we will see later on, the food and allied products manufacturing in Groningen, and some branches in Amsterdam, were also attractive. Only four cities had a migration deficit for most of that time: Leiden, where the old cloth industry could not compete with the new industrial textile centres; Maastricht, which had industrialised very early on, had, however, stagnated by the end of the century. The position of 's-Hertogenbosch as a regional capital was challenged by adjacent Tilburg as well as by Eindhoven. Leeuwarden in the nineteenth century did not succeed in creating industrial specialisation.[8]

In view of the evidence concerning migration in individual cities, we may conclude that around the middle of the nineteenth century there was a balance between the immigration of families and individuals. In the following decades, however, the number of individuals among the immigration units rose in comparison to the number of families (Table 6.2).

Table 6.2. Families and individuals among the immigration units

	1850		1870		1900	
	ind	fam	ind	fam	ind	fam
Dordrecht	59.0	41.0	75.5	24.5	78.6	21.4
Groningen			70.7	29.3	75.8	24.2
Rotterdam	50.0	50.0			73.6	26.4

Sources: Koopmans, *Dordrecht*, ch. 8.2; Kooij, *Groningen*, ch. 3.2.4; Van Dijk, *Rotterdam*, ch. 5.8.
Explanation: Dordrecht 1855, 1879, 1904; Groningen 1870-1880, 1900-1910; Rotterdam 1853, 1907.

The immigrating individuals were, for the greater part, rather young, and over time the average age dropped even further. In Dordrecht in 1855, 2.0% were 16-20 years old, 30.5% were 21-25, 29.4% were 26-30, and 12.7% were 31-35. In 1907 these percentages were 25.1, 31.4, 12.1, 7.5 respectively.[9] In Groningen in the decade 1870-80, 56.7% of the immigrating individuals were 15-24 years old, and 18.2% were 25-29. In 1900-1910 the proportion of those aged 15-24 was about 3% higher while the proportion of those aged 25-29 had fallen by 2%.[10]

[8] Van der Woude, *Leeuwarden 1850-1914*, ch. 3.
[9] Koopmans, *Dordrecht*, appendix table 8.
[10] Kooij, *Groningen*, table 32.

An interesting difference was that more single women migrated to Dordrecht than men. In 1855 the ratio was about 60:40. In the following decades this ratio changed to 55:45. In Groningen the ratio was just the opposite, 57:43 men to women in 1870–80 and 52:48 in 1900–1910. This difference may have been caused by the fact that more men migrated to Rotterdam, which was situated only 25 kilometres from Dordrecht and for that reason 'competed' with Dordrecht for workers. Unfortunately, the study on Rotterdam provides no evidence on this matter.

To complete the picture of the general characteristics of urban immigrants, it should be added that the heads of the immigrating households were generally much older than the immigrating individuals. In Groningen around 1870, 60% of the heads of households were over 35 years of age, and in 1900 this percentage was not much lower.[11]

Vertical migration

Most migration to Dutch cities in the last part of the nineteenth century can be characterised as stepwise migration. In Groningen in 1870–80, 72% of the individual male immigrants came from the surrounding countryside and villages and smaller cities in the north of the Netherlands. For the women this figure was as high as 80%. During the next decade, when the agrarian depression struck the north of the Netherlands, this type of migration increased by 10% because of the fall in migration from other parts of the country. In 1900–1910, 61% of the individual men and 74% of the individual women still came from the north.

Leeuwarden was also an important destination in stepwise migration. From 1850 onwards, about 60% of the immigrating families came in from the province of Friesland.[12] Among the migrating heads of households, about 30% went back to their area of origin. Almost half of the migrating families in the period 1870–90, however, went to the West, mainly to Amsterdam, although some went to Groningen. Long-distance emigration from Groningen by heads of households around 1890 took place in as many as 60% of the cases.[13]

The greater number of the families also arrived in Groningen by means of stepwise migration: 74% in 1870–80 and 70% in 1900–10. The smaller cities in the province of Groningen, Winschoten and Appingedam, played an important role by 'collecting' people from the countryside who then migrated to Groningen. Direct migration to the city was mainly from the adjacent countryside.

The migration to Dordrecht, which has been analysed thoroughly only for two separate years, 1855 and 1904, to some extent shows the same pattern. In 1855, 50% of the immigrating individuals came from the surrounding countryside. For families this figure was as high as 69%. In 1904, 45% of the individuals

[11] For other cities there is no information on this point.
[12] Van der Woude, *Leeuwarden*, 314. This analysis does not include individuals.
[13] Analysis based on samples from the Registers of Population in benchmark years. Only migration within a decade after those benchmark years is taken into account.

and 48% of the families arrived by means of stepwise migration. A substantial part of the Dordrecht immigrants, however, came from Rotterdam and The Hague. In 1855 this category made up 25% of the individuals and by 1904 had risen to 40%. For the greater part this must have been return migration.[14]

Indeed, return migration made up a substantial proportion of the total migration movements. An analysis of immigrants who arrived in the city of Groningen from the Groningen countryside in the first five years of a decade, indicated that during that decade only 50% stayed in the city. About 35% went back to their places of origin or to another village or small town in the north. In the period under consideration here, 1870-1910, only 5% (in the beginning) to 7% (towards the end) moved on to big cities in other parts of the country.[15] This brings us to horizontal migration.

Horizontal migration

Migration from Dordrecht to Rotterdam and The Hague has already been mentioned in the previous section. One may characterise this migration as horizontal, but it can also be considered as a next step in a vertical migration movement. This was also the case in Groningen. More than two-thirds of the migrants from the province of Groningen who emigrated along the lines of the urban network system, as mentioned above, went to the three largest cities in the Netherlands, most of them to Amsterdam. The others went to cities of the same rank as Groningen.

Still, the city of Groningen received its share through horizontal migration. In the period 1870-1910, a growing number of migrants followed this pattern. At the beginning of the period Amsterdam and larger cities not so far removed from Groningen were virtually the only destinations. Towards the end, however, Rotterdam and The Hague also received their shares, and other large cities in the Netherlands received numbers of Groningen emigrants more or less corresponding with their size. To investigate the growing importance of this horizontal migration, I traced the movements of people who were born in the city of Groningen in 1870. At the age of 30, in 1900, 16% of the living members of this birth cohort lived in other large cities all over the country, with one-third of them living in Amsterdam. Only 4% lived in other places outside the north.[16]

Until now, migration to Amsterdam has never been analysed quantitatively. We have, however, some information on the second city in the Netherlands, for the greater part based on a quantitative analysis for 1853 and 1858. In that period Rotterdam held a top position in vertical migration. Rotterdam collected 20-25% of its immigrants from the smaller cities in the southern part of the province

[14] The analysis of the migration in Dordrecht unfortunately does not include return migration.
[15] The others died in the city or went abroad. A small number migrated to small places outside the north of the Netherlands.
[16] 62% still lived in Groningen, 9% lived in neighbouring municipalities, 15% in the north most of them in middle-sized towns like Leeuwarden, Winschoten, and Meppel, and 2% had gone abroad.

of Zuid Holland and the western parts of the provinces of Utrecht and Gelderland. These immigrants came especially from small cities situated along the big rivers. The surrounding countryside was also an important expulsion area. However, many migrants from this area first settled in smaller cities, such as Brouwershaven (in Zeeland), Hellevoetsluis, Delft, Schiedam, and, as we have seen already, Dordrecht.[17]

It is not clear what role Rotterdam at that time played in horizontal migration, but there are signs that Rotterdam's harbour already functioned as an attraction to a substantial number of immigrants from other cities, as well as from Belgium and Germany. In 1850, 16.8% of the Rotterdam heads of households were born outside the province of Zuid Holland, and 2072 heads of households (3.8%) were born in foreign countries. In 1880, on the eve of the large migration waves due to the agrarian depression, these percentages were 16.8 and 2.8 respectively.

Unfortunately, the first subsequent period for which quantitative data are available is 1907-1913. At that time about 30% of the immigrants had come into the city along the lines of the urban network system.[18] Therefore, we may conclude that in the second half of the nineteenth century, though the greater part of urban immigrants came from the surrounding areas of individual cities, specialisation became more and more important as a pull factor for immigrants, especially for those coming from large cities all over the country.

Immigrants and the urban labour market

One might expect that most urban immigrants found a job in the sectors of industry which stressed the industrial specialisation of individual cities. This, however, was only partly the case. In Amsterdam, for instance, it proved to be extremely difficult for immigrants to find a job in the modern industrial sector.[19] This sector, where wages were relatively high and labour conditions were better than in the traditional craft sector, was dominated by people born in Amsterdam. Immigrants for the greater part did not even succeed in finding a regular occupation in the traditional craft sector, and were obliged to accept irregular work in the docks.[20] There was a big 'reserve army' of immigrants from the Noord Holland countryside, especially during the agrarian depression.

There are signs that a dual labour market existed not only in Amsterdam, but also in other cities in the Netherlands. In Rotterdam for instance, the docks played the same role for immigrants as they did in Amsterdam.[21] Even in a city without a modern sector such as Leeuwarden, the immigrants who migrated ver-

[17] Van Dijk, *Rotterdam*, 212.
[18] Bouman & Bouman, *Groei grote werkstad*, 132-137.
[19] J.L. van Zanden, *De industrialisatie in Amsterdam 1825-1914* (Bergen 1987).
[20] Ad Knotter, *Economische transformatie en stedelijke arbeidsmarkt. Amsterdam in de tweede helft van de negentiende eeuw* (Utrecht 1991).
[21] Bouman & Bouman, *Groei grote werkstad*.

tically from the Frisian countryside were blocked by the locals.[22] As a result, many of them went back to their place of origin or migrated to Amsterdam where they met with the same mechanism.

Recently I tried to find out if this dual economic structure, combined with a dual labour market, also existed in Groningen.[23] Groningen at the end of the nineteenth century had a modern industrial sector consisting of printing firms, food industries (tobacco, coffee and tea, sugar and canned meat), a producer of bicycles, and a ready-made clothing industry.[24] Although the average size of these firms seldom exceeded 50 employees, these modern industries employed 25% of the total workforce in industry. They paid higher wages.

To measure the effects of this dual economic structure on the labour market, I compared random samples of the Groningen heads of households in benchmark years with random samples of immigrants covering the decades after those benchmark years and a cohort of children born in Groningen in 1880. Table 6.3 gives their occupations around 1910.

Table 6.3: Occupational structure of Groningen heads of households (1910), immigrants (1900-1910), and birth cohort members (1910)

	heads of households		immigrants		cohort members
agriculture	1.5	(1.8)	0.7	(1.0)	4.3
modern industry	12	(14.5)	4.4	(6.1)	19.9
traditional crafts	20	(24.1)	25.4	(35.1)	24.2
services	42	(50.6)	35.3	(48.8)	46.3
free labour	7.5	(9.0)	6.5	(9.0)	5.7
without employment	17		27.7		-
n	760		889		146

Source: Samples from the Registers of Population (heads of households and immigrants 1:25; birth cohort 1:2). See also Kooij, 'Artisans'.

Explanation: Only men included. Between brackets: percentages excluding the unemployed.

The table shows that the immigrants had the greatest problems in the labour market, they had almost no access to modern industry. Therefore, Groningen immigrants for the greater part found employment in the traditional craft sector, especially in the food sector (mainly in bakeries and butcher's shops). In the service sector they generally obtained only low-status jobs as porters or very small shopkeepers. Many of them had irregular jobs (free labour) and many were unemployed. The single women usually became domestic servants. The better paid

[22] Van der Woude, *Leeuwarden*, 309-323.

[23] Pim Kooij, 'Artisans and the structure of the labour market in Dutch provincial capitals around 1900' (paper presented at the 2nd international urban history conference, Strasbourg September 1994).

[24] Pim Kooij, 'Groningen: central place and peripheral city', in Pim Kooij and Piet Pellenbarg (eds.) *Regional Capitals. Past, Present, Prospects* (Assen 1994) 37-63.

jobs in the service sector were for the indigenous heads of households, and the cohort born in Groningen also included high percentages of bookkeepers and clerks. Unemployment was totally absent from this group.

This picture is coloured by vertical short-distance migration, which as we have seen formed part of the process for the bulk of the young single immigrants. The immigrants who had travelled long distances, however, sometimes obtained very different jobs, as civil servants, professors, teachers, vicars, lawyers, bank or insurance company officials or nurses. In these job areas the 'horizontal' immigrants surpassed the 'vertical' ones. For the greater part heads of households were involved. Unmarried males gained entry as shop-assistants in chain stores. Unmarried women tried, often successfully, to get jobs as teachers or nurses via the urban network migration system.

Of course, not all long-distance immigrants were successful. Many of them were returned emigrants who had great difficulties finding jobs in the just same way as the short-distance immigrants.

The Groningen evidence shows an important difference between horizontal and vertical migration. People with higher education and exclusive occupations only migrated via the horizontal circuit and usually travelled long distances. Their recruitment partly took place on a national level, for instance via advertisements in national newspapers or through professional networks covering the whole country. In addition, this long-distance migration sometimes took the form of transfers within the bureaucratic system, the railway companies or between branches of banks, insurance companies and department stores. Moreover, the university became an important pull factor.

An interesting point is that factory owners, who were of special importance in determining the specialisation in towns, were, for the greater part, immigrants. They immigrated vertically as well as horizontally. In 1910 Groningen counted 28 rather rich factory owners. Eleven of them had been born in the city itself, 13 in the province of Groningen, and 4 had been born in the west and in Germany.[25] Therefore, specialisation was, for the greater part, induced by people from the region itself.

When we take a closer look at Groningen as a supplier of migrants for the national circuit, we can distinguish five sectors of commerce and industry for which heads of households were inclined to migrate. These sectors, for which more than 10% emigrated in every decade and more than 50% of these emigrants left the north, were building, trade, traffic, the professions, and the civil service. The inclination to migrate was greater in the higher income groups than in the lower income groups, especially before 1890. After that year, members of the middle classes also acquired a growing propensity to migrate. This was connected with rising opportunities in the west where a 'take off' was taking place. The relative proportion from the lowest income group remained below 10%, with

[25] Kooij, *Groningen*, 338.

the exception of the period 1890-1900 when 12% of this income group emigrated. However, in absolute terms this low-income group formed the largest group. Many carpenters, bricklayers and small merchants tried their fortune in Amsterdam and other cities. Unless they were civil servants, lawyers or railway officials, their chances were not very good. Many of them returned in despair. Indeed, in this way 'horizontal migration' of families also showed a dual structure.

Among the single male emigrants to other cities there was an overrepresentation of journeymen, bakers, shop assistants, merchants, tailors, and unemployed. Almost all the single women became domestic servants. Almost 10% of the domestic servants, who had previously migrated to Groningen, moved to other, larger cities. Many of them also had to return.

Living conditions

The urban migration waves in the second half of the nineteenth century coincided with the removal of the ramparts. In 1874 a law was proclaimed which approved the dismantlement of the city walls in the north, east and south of the Netherlands, because the French-German war had shown that the ramparts were no longer of any use. That decision had been taken some decades earlier for the western cities. There the Dutch inundation line had to assume a defence function.

This development enabled a fundamental rearrangement of the urban space, which before that time was limited by walls, which in most cities dated from the beginning of the seventeenth century. For three centuries these walls had determined the distribution of the urban populations.

This distribution had taken the same pattern in every city. Though the elite clustered in or near the city centre, there was no clear residential segregation. The upper class for the greater part lived along the main streets, the side-streets were characterised by houses for the middle classes, while the lower status groups crowded into houses in back-streets. Even this system was repeatedly broken through, because of the fact that many low-income people lived in the cellars of the houses of the rich.

Therefore, no Dutch city showed an ideal-typical distribution, as described, for instance, by Sjoberg.[26] Still, some cities showed some vague reflections of that pattern. In Groningen, for instance, the elite lived right in the town centre, while the lowest social groups crowded against the city walls. Many of them, however, also lived in the centre, as did middle-class people. This pattern could also be found in other cities which were not situated alongside rivers, for instance The Hague, Haarlem, 's-Hertogenbosch and Delft. In river cities the elite usually lived alongside the river and the harbours (for example Rotterdam and

[26] G. Sjoberg, *The preindustrial city* (New York 1960). In some preindustrial cities Sjoberg discerned a population distribution in concentric zones: the elite occupied the city centre, circled by other groups with diminishing status up to the lowest ranks on the outskirts.

Dordrecht), but many labourers also lived in that neighbourhood because they worked there.

Amsterdam was a case apart. Here the elite had created its own concentric zones formed by the artificial canals. The labourers for the greater part were locked up behind the boulevards which lined these canals, while a portion of the middle class lived in houses in side-streets.

The removal of the ramparts created a need for a new kind of urban planning. In most cities a part of the ramparts was transformed into parks, another part became a dwelling area for the well-to-do, and a third part was transformed into an area for industry and large utility buildings. Outside that zone new houses were built, usually with low rents.

Map 6.1 shows that that situation existed in Groningen. The park is in the north-west. A large Academic Hospital was built in the east. And in the south, representative boulevards for the well-to-do were constructed. New industry was situated in the neighbourhood of the railway station. The rich also occupied an area of villas near the station. In the extreme north and in the south-east, low-rent houses were constructed. For the greater part these cheap houses were constructed by private individuals. There were also some enclaves of houses built by public building companies with the financial participation of the elite. However, before World War I they provided only less than 5% of the new houses needed.

How did the migrants fit into this pattern? Migration into Groningen rose at the time that residential segregation started to take shape. The elite moved from the city centre to the new boulevards in the south. Their houses were transformed into big shops, banks, hotels, restaurants and offices. Smaller shops were located mainly along the exit routes where the people from the province came to shop on market days. This process of city formation did not, however, cause a fall in the number of dwellings. Many shop-owners lived above their shops, and in the cellars there remained room for low-status people. The average number of inhabitants in the inner city, however, fell from 7.5 per house in 1870 to 6 in 1910.[27]

The locals tried to move out of the inner city, the rich because of the noise and the presence of the poor in the backstreets, the middle class because of their increasing awareness of the unhealthy living conditions in their neighbourhoods, which were stressed by 'hygienists' such as L. Ali Cohen who was a leading figure in the Dutch public health movement. Therefore, many members of the lower middle class settled in newly built houses in the south of the city. House owners preferred these types, postal workers, policemen, carpenters, painters and shop assistants, to lower status workers because of their ability to pay the rent. However, their new houses also had many deficiencies, such as the absence of a sewage system. Only the houses of the public building companies, or most of

[27] Kooij, *Groningen*, 241.

them at least, had modern utilities.

The middle class first left the old parts in the west and the south-east of the inner city where the houses were worst, leaving the low-income, working-class people who could not afford the rent of about two guilders a week which had to be paid in the south of the city. It was there and in the inner city, from where most locals had departed, that room was created for immigrants.

In 1890-1900, 31% of the immigrating units settled in the city centre, near the central square, and 11% in the two old working-class areas. The rest of the old city received 14%. The new well-to-do areas along the boulevards in the south and the so-called professors area in the west received 14% of the immigrants. As for the rest, 21% settled in the southern outskirts and 8% in the northern ones; 2% came by ship.[28]

It is not surprising that most immigrants settled in the city centre since most of them were young and unmarried. Many of them rented a place above the shops and behind the workshops where they were employed. But many others rented a room, or a bed, in a working-class houses. If the elite had not moved to the boulevards, the number of single immigrants living in the inner city would have been even higher, because most immigrating young women entered domestic service in the houses of the elite and the upper middle class.

The immigrating families tried to avoid the inner city. However, about 30% settled there. Another 30% found houses in the new southern parts of the city. Among them was a small percentage that settled in more expensive houses along the main road to the south. Most of them, however, had to be content with houses the locals had left there. The same was the case with the 20% in the northern outskirts.

The housing situation of immigrants in other Dutch cities has never been studied quantitatively. Qualitative studies, however, indicate that the settlement pattern seems to have been similar to the one in Groningen. In Rotterdam, for instance, the immigrants who worked in the harbours also seem to have mainly lived in the inner city, in bad housing left by the locals. These locals moved to new areas on the outskirts of the town. The inner city, where city-formation also took place, could not of course accommodate all the immigrants. The new areas in the south (Feijenoord, for instance) were indeed partly built for immigrants, although many of them could not afford the rent of two guilders a week. As a result, the average number of inhabitants per house in the inner city in Rotterdam was very high. In 1909 11% of the Rotterdam houses consisted of only one room with an average of 2.9 inhabitants.[29]

The Rotterdam elite for the greater part left the inner city. They moved for instance to Kralingen in the north-east. Some of them even moved to The Hague, which at that time was becoming famous as a residential city.

The Hague was considered by many as an attractive place of settlement for

[28] Calculated from a sample of immigrants from the Register of Population (n=775).
[29] Bouman & Bouman, *Groei grote werkstad*, 58.

retired people from the colonies and for civil servants employed by the national government, which was situated in the city.

However, this government sector employed only 6% of the workforce. Even The Hague had an important industrial sector employing 36% of the workforce, although the trade sector was the fastest grower (17% in 1900). Compared to Amsterdam and Rotterdam, the traffic sector was rather small because of the absence of harbours and international trade. Also of importance were domestic service (20%) and other services (17%).[30]

As a result, The Hague, as the immigration numbers show, not only attracted well-to-do 'horizontal' migrants but also functioned as an important destination for low-status immigrants from the countryside, especially during the agrarian depression. The industry was mainly small-scale and focused on the local and regional market: printing, food, furniture, clothing. Large mechanised industry was not totally absent (metal, bread and dairy products factories), but in 1889 only employed 14% of the labour force.[31] It is unclear if the labour market had a dual character, but there was at least a big traditional crafts sector, and the expanding number of shops also offered opportunities for immigrants. At that time even some emigrants from Groningen went to The Hague to open a shop there or to become a shop assistant.

Residential segregation in The Hague took a special form. The city had never had fortifications and therefore limitations on the use of space had been absent. As a result the big houses had ample courtyards which were used for the construction of houses for the working class. These were the so-called hofjes (almshouses), which in other cities were only built for the old and the sick. In 1895 there were 7000 of these hofjes where about 40,000 lived people out of the sight of the elite.

When the population of The Hague started to grow, in about 1860, the elite started to move from the inner city to newly built villa parks just outside that area. In years to come they filled in the whole area between The Hague and the old fishing village of Scheveningen. This movement was supported by the construction of tramways. By doing so they created room for the construction of shops, offices and public buildings in the inner city (city formation) but also for the construction of more hofjes. It is here that the low-income immigrating families must have found their lodgings, because the number of inhabitants of the inner city hardly fell.

In 1892, for public health and security reasons, the construction of more hofjes was forbidden. About the same time the building of multi-storey houses for the middle classes started, rather removed from the villas of the rich. Some working-class houses were built, although not many by public companies. As in Groningen, these houses were monopolised by upper working-class and lower

[30] P.R.D. Stokvis, *De wording van modern Den Haag* (Zwolle 1987).
[31] Stokvis, *Wording modern Den Haag*, 111.

middle-class people.[32] The chances are that most of them were locals, too.

Amsterdam extended in a way comparable with other cities. The removal of the fortifications created space for a new belt of large industries, villa parks, working-class districts and public buildings. There were, however, some differences. The first was that many members of the old Amsterdam elite refused to leave their houses along the canals.[33] They kept living near to or on top of their offices. Some of them did depart, but often to move to villages situated alongside the railway to the south. This process of suburbanisation only took place in other Dutch cities after 1900. One alternative for the elite inside Amsterdam proved to be successful: the construction, in 1864, of the Vondel Park just outside the canal belt, where villas were also built. Here some members of the elite settled to make room for city-formation in the inner city. In other villa areas outside the inner city, there was an overrepresentation of rich immigrants.[34]

Most new houses were built by private companies for workers with an income of between 600 and 1000 guilders a year and for members of the lower middle class who were considered safe tenants. Middle-class houses acted as a buffer for the houses of the rich. In Amsterdam, not only social segregation took shape but the also segregation of working and living.[35]

Most immigrants, victims of the dual labour market, did not earn that 600 guilders. Together with the lowest strata of the autochthons, they had to live in three parts of the city: De Jordaan, De Eilanden, and the Jewish quarter.[36] De Jordaan was the large working-class area in the extreme north-west of the inner city. Living conditions were very bad there, as was repeatedly pointed out by the Amsterdam 'hygienists'. The same was true of the semi-islands alongside the river IJ and the harbours, while population density and sanitary conditions in the old Jewish quarter in the east of the inner city were just as bad.

Therefore, in every city the bulk of the immigrants had to live in the inner city in bad houses vacated by the locals. In the next section we will see if they had any chance of escaping that situation.

Immigration and social mobility

It is not easy to determine how successful the urban immigrants were exactly. In the previous sections, it has been pointed out that their vicissitudes differed depending on which group they belonged to. There was a difference between the opportunities for migrants who travelled long distances and for those who immigrated vertically from the surrounding countryside. There were also unequal opportunities for single migrants and heads of households. But it might

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[32] Stokvis, *Wording modern Den Haag*, ch. 2.
[33] Boudien de Vries, *Electoraat en elite. Sociale structuur en sociale mobiliteit in Amsterdam 1850-1895* (Amsterdam 1986) 63.
[34] De Vries, *Electoraat en elite*, 64.
[35] M.F. Wagenaar, *Amsterdam 1876-1914. Economisch herstel, ruimtelijke expansie en de veranderende ordening van het stedelijk grondgebruik* (Amsterdam 1990).
[36] Wagenaar, *Amsterdam*, ch. 8.

have been that a person's chances depended in the first place on the social group they belonged to.

The Amsterdam experience gives some support to that view. While the immigrating members of the lower class and the middle class seem to have been very unsuccessful, the elite did rather well. The upward social mobility of the immigrating members of the elite and the upper middle class was greater for some periods than that experienced by the indigenous elite. This is indicated by an analysis of the people who were entitled to vote for the Dutch Tweede Kamer (the equivalent of the British House of Commons). This group contained about 7% of all heads of households. Between 1854 and 1864, according to the levels of tax assessments, upward social mobility of the people born in Dutch cities other than Amsterdam itself was 26.2%; the figure for the people born in Amsterdam was 18.7%. Between 1874 and 1884 the Amsterdam elite was more successful: 25.9% versus 16.7%. In both periods the locals experienced less downward mobility than the newcomers: about 9% versus 13.1% and 11.7% respectively.[37] It is possible, however, that many of these immigrated elite members had come in at a very early age and had therefore made their career in Amsterdam from the start.

The Rotterdam evidence spans the total group of married immigrants without differentiation. In 1870 the distribution of the total Rotterdam population was 66.8% autochthons versus 32.2% allochtons. In terms of upward social mobility of heads of households, the ratio was 73% autochthons versus 27% allochtons (between 1870 and 1880). As regards downward social mobility, this was 62.9% versus 37.1%.[38] Therefore, the immigrating families were generally worse off. Moreover, we must keep in mind that most immigrants never succeeded in becoming tax payers. It was within this group that real proletarisation occurred.

To gain a glimpse of the distribution of social mobility, I made a new analysis of the Groningen database of immigrants in the period 1890–1900. In that period only 6.7% of the immigrating units had to pay the local poll tax. This means that almost all immigrants belonged to the lowest social level. This is not surprising because most of them were young and single. But even the heads of households had a lower income. Only 25% of them had to pay tax compared to 35.3% of the indigenous heads of households. Moreover, most of the taxpayers did not earn much more than the 500 guilders which was the limit for taxation.

Upward social mobility only occurred for 2.5% of immigrants; 0.5% of the immigrants experienced downward social mobility in the period under consideration. The 19 cases of upward social mobility for the greater part concerned people from large cities in the west (people in military service, the civil service, the professions, and higher education). A smaller group came from places in the north; they had jobs in the craft sector or had retired. Within both groups there

[37] De Vries, *Electoraat en elite*, table 10.4.
[38] Van Dijk, *Rotterdam*, 148 and 214.

was a small proportion of people born in Groningen who had made their money elsewhere and returned.

Apart from this intragenerational mobility, the Groningen database also enables us to shed some light on intergenerational migration. We constructed birth cohorts in benchmark years for nine villages and small towns in the province of Groningen. As has already been pointed out, many of the people born in the villages migrated to the city of Groningen. At least 15% of the members of the birth cohorts of 1850 and 1870 lived in the city at some point in their lives. This was a substantial percentage when we bear in mind that about 30% of the cohort members had died very young.

For one village, Hoogkerk, a municipality of dairy farms to the west of the city, we already know how much social mobility there was among the people who went to the city. At the age of 40, when the career of most people was already complete, 35 members of the 1850 cohort (N=120) and 26 members of the 1870 cohort (N=120) lived in the city of Groningen. Some had migrated at an early age with their parents. Others, an almost equal amount, had arrived individually. Most immigrants had a low-status background (working class and lower middle class). Table 6.4 shows their social mobility.

Table 6.4. Social mobility of people born in Hoogkerk living in Groningen at the age of 40

	cohort 1850				cohort 1870			
social class of cohort member	lower	lower	middle	elite	lower	lower	middle	elite
social class of father	*middle*				*middle*			
lower class	14	4			12		2	
lower middle class	5	2	3	2	3	2	1	
middle class	1				1	1		1
elite		1	2	1			1	
N	35				26			

Source: Marcel Clement, 'Demografisch gedrag, leefsituatie en mobiliteit. Een analyse van vier generaties', in P. Kooij, *Dorp naast een stad. Hoogkerk 1770-1914* (Assen 1993) 160-199, 193

Explanation: The incomes of the cohort members or their partners are compared to the income of their fathers at the time of their birth.

The table shows that most social mobility was downward. The greatest fall was experienced by those women who married a partner of a lower rank. The happy few who reached a higher position became, for instance, architects, surveyors, grocers or merchants. We still do not know what happened to the 9 people from the 1850 cohort and the 7 people of the 1870 cohort who went via Groningen to the big cities in the west or abroad, but we doubt if they were better off there.

Social relations

Our knowledge of the relations between immigrants and locals for the greater part concerns the upper classes. Research into the composition of elites has been conducted for a number of cities. One of the observations which emerged from this research is that, in the course of the nineteenth century, thanks to greater opportunities for geographical mobility, a national elite took shape consisting of the top layers of several local and regional elites.[39] This elite was not homogeneous, but consisted, according to some researchers, of people who had high assessments in land tax, a tax on wealth, or the *patentbelasting* paid by industrialists.[40]

There was indeed a growing geographical mobility among local elites, which caused a concentration of them in the west of the country. The Hague and Amsterdam were the main centres. A number of the old elite of Delft and Rotterdam, for instance, moved to The Hague, as did a number of the old Frisian nobility.[41] But we may wonder if this is indeed an indication of the formation of a national elite. Perhaps The Hague became in this way a stronghold of the traditional elites, whilst in Rotterdam and Amsterdam the modern 'economy based' elites became stronger.

But even in Amsterdam the traditional elite, a mixture of noble and old patrician families, remained strong. Of course new groups came forward, especially rich Jews and Germans, people who had made fortunes in the colonies, and industrialists. But this did not necessarily mean *connubium* and *convivium*.[42]

This was also the case in provincial capitals. In Maastricht for instance, rich industrialists were not considered as equals by the old elite, even if they had been born in the city itself. Top civil servants, however, who migrated along the lines of the urban network system, gained easy access to the upper echelons of society.[43] Leeuwarden showed the same picture.[44]

In Groningen the traditional elite remained dominant right up until 1915. There was not much emigration, and even marriages between members of the local nobility and partners from elsewhere were rare. The new industrialists, who, as has already been mentioned, originated for the greater part from the province of Groningen, did not mingle with the old aristocracy. Their sons and daughters married children of other members of the economic elite.[45] If *connu-*

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[39] K. Bruin, *Een herenwereld ontleed. Over Amsterdamse oude en nieuwe elites in de tweede helft van de negentiende eeuw* (Amsterdam 1980).

[40] N. Bos, R. de Peuter, 'De lijsten van verkiesbaren voor de Eerste Kamer als bron voor verkiezingsonderzoek (1850-1892)', *Tijdschrift voor Sociale Geschiedenis* 14 (1988) 412-437.

[41] J.A. de Jonge, 'Delft in de negentiende eeuw. Van stille nette plaats tot centrum van industrie', *Economisch- en Sociaalhistorisch Jaarboek* 37 (1974) 145-248; Stokvis, *Wording modern Den Haag*, ch. 3; Yme Kuiper, *Adel in Friesland 1780-1880* (Groningen 1993) 134.

[42] De Vries, *Electoraat en elite*.

[43] Nick Bos, 'De 'deftige lui'. Elites in Maastricht tussen 1850 en 1890', *Tijdschrift voor Sociale Geschiedenis* 12 (1986) 53-90.

[44] Van der Woude, *Leeuwarden*, 332-349.

[45] Kooij, *Groningen*, ch. 2.4.

bium was almost absent, there was *convivium*. As in Maastricht, the old and new elites, immigrants and locals, met in 'De Groote Sociëteit', an exclusive club. And in politics there was cooperation, too. In 1900, 17 of the 31 members of the municipal council had been born in the city itself, 8 had been born in the province of Groningen, and 6 had been born elsewhere; 22 of them belonged to the elite. In spite of their different backgrounds (newcomers had more modern occupations such as director of the power station, engineer on the railways), in politics the old and new elites established a firm esprit de corps. What is good for the elite is good for the city, was their conviction.[46]

Around 1950 Bouman and Bouman collected the ego-documents of people who had migrated to Rotterdam at the end of the nineteenth century. This collection of letters, diaries and retrospective essays gives some insight into the social relations of immigrants from the working class and the lower middle class.

Their social contacts seem to have been limited to people from the same region of origin, who clustered together in the same parts of the city. They kept speaking their own dialect, which caused a lot of trouble for their children at school. The contact with their families in the region of origin in many cases remained intact and was an impulse to chain migration. Religion in some cases was an aid to integration, but in other cases people ceased to visit church, because, for example, they did not like the style of the vicar. The socialist movement became an alternative for some immigrants.[47]

Some of these characteristics, I found, also applied to the Groningen immigrants. There was clustering. There was even an overrepresentation of immigrants from the countryside east of the city in the eastern parts of Groningen, from the west in the western parts, and so on. This was also the case in Rotterdam. The existence of chain migration was sometimes very clear. For instance, in some cheap hotels in the city centre people arrived from the same place year after year. There were also student houses with only students from Friesland, while others only lodged students from Amsterdam. Some shopkeepers and craftsmen always recruited their employees from the same places. And many domestic servants were succeeded by girls from the same place of origin, sometimes even by younger sisters.

It is not easy to be certain about the scale of integration of immigrants in the urban society. One indicator, however, is *connubium*. To find out if immigrants were accepted by a local partner, for a Groningen born cohort, 1880, the place or origin of the partners of a group of people born in Groningen in 1880 was taken into account. Table 6.5 gives the places of birth of the partners of the cohort members who still lived in the city at the time of their marriage.

The data on the heads of households give a very rough indication of the

[46] Pim Kooij, 'Fingerprints of an urban elite', in H. Diederiks, P. Hohenberg, M. Wagenaar (eds.) *The visible hand and the fortune of cities* (Leicester 1992) 102-124.
[47] Bouman & Bouman, *Groei grote werkstad*.

Table 6.5. Birthplaces of partners of cohort members around 1900

	heads of households	partners men	partners women
City of Groningen	45.2	67.2	61.4
Province of Groningen	30.1	20.9	20.5
North-Netherlands	16.5	6.0	6.0
Elsewhere	6.3	6.0	10.6
Abroad	1.9	0.7	3.0
N	753	134	132

numbers of autochthons and allochtons at that time. The table shows that the men were more inclined to choose their partner from within the city. The women secured relatively more partners from far away. This is in accordance with the general structure of immigration, since men migrated longer distances than women. Therefore, more men from other parts of the country were available. An interesting point is that not all partners lived in the city of Groningen just before marriage. Some people lived in the province. This means that they must have met their partner when they visited the city. This could have been on market days or at the annual fair, which was a big attraction at that time.

Conclusion

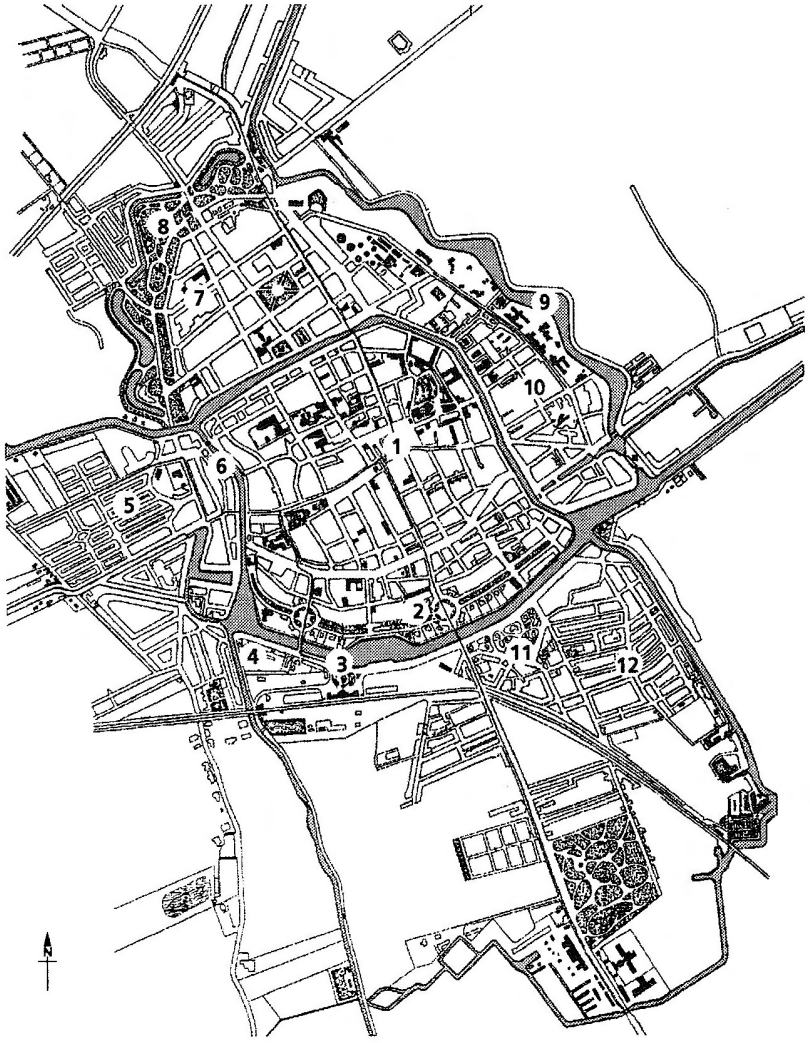
In most Dutch cities in the second half of the nineteenth century, the number of emigrants and immigrants in any given decade together outnumbered the population of the city itself. The greatest number of immigrants came in from the surrounding countryside. They might have been pulled by the opportunities specialising cities seem to have offered. However, that they were pushed by the mechanising of agriculture and the agrarian depression seems to be a better explanation.

Actually, the cities could not offer them very much. The locals had better chances of finding their way in the labour market. Therefore, many immigrants departed for a larger city. But there the duality of the labour market proved to be an even bigger obstacle, while living conditions were bad. As a result, many of them remigrated, bitterly disappointed, to their region of origin or to a smaller city which they had perhaps passed earlier.

Migration along the lines of the urban network system was sometimes more successful, especially when highly educated people were involved who had specific jobs which were distributed on a transparent national labour market.

Yet, many low-status immigrants must have had positive feelings about their initiatives. The situation in the countryside was even worse. Moreover, a number of the men found a partner in the city, or the opportunity to learn skills for a job, and returned as craftsmen.

Map 6.1. Groningen in 1913



1 City Centre
2 Boulevards
3 Railway Station
4 Industrial Area
5 Professors area
6 Old western working class area
7 Old northwestern working class area
8 Park
9 Academic hospital
10 Old eastern working class area
11 Villa park
12 New working class/lower middle class area

7

The destruction of Dutch cities during the Second World War.[1]

Introduction

Until now, no systematic research has been performed on damage to Dutch cities during the Second World War. Of course the destruction of Rotterdam in May 1940 is well known, but even most inhabitants of the Netherlands are unaware of the fact that in a considerable part of the country almost all cities were slightly or severely damaged.

There seem to be two reasons for this lack of awareness. The first is that the rebuilding of damaged cities coincided with the modernisation of all cities. After the war, in all cities zoning, the separation of urban functions, resulted in locating retail trade and other aspects of the service sector in the city centres at the expense of dwellings and industry, which were transferred to the outer quarters. Therefore most inner cities were restyled and showed the same modern face, so that it was unclear whether this was caused by war or by 'peaceful' interventions.

The second reason is that the history of Dutch cities during the Second World War focuses on individual cities. Almost all cities and even villages have their own stories of this period, mostly written by local people, bearing bombastic titles like 'How Nijmegen suffered' or 'How Groningen fought'. But there is no synthesis. The spatial variable only figures in Dutch general histories of the Second World War when strategic operations are described.[2]

Therefore, to be able to make any analysis of urban damage it was necessary to do close reading of all 30 volumes of the official Dutch history of the Second World War, written by Lou de Jong[3] and, of course, of many monographs on individual cities. This resulted in a rather complete list.[4]

Periodisation

When we take into account this list of damaged cities, it is possible to distinguish three periods in which most damage occurred. The first period is May 1940 when the Germans attacked the Netherlands. In this period the air attack

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[1] First published in M. Körner (ed.) *Stadtzerstörung und Wiederaufbau, Zerstörung durch die Stadtherschaft, innere Unruhen und Kriege* (Haupt Verlag Bern 2000) Volume 2, 289-301.

[2] See for instance: A. Korthals Altes, *Luchtgevaar. Luchtaanvallen op Nederland 1940-1945* (Amsterdam 1984) which gives a complete survey of the air attacks; Peter A. Veldheer & E. v.d. Weerd, *De slag om de Veluwe 1945* (Arnhem 1981); B. Koning, *Bevrijding van Nederland 1944-1945* (Nijkerk 1960); W. Denis Whitaker & Shelagh Whitaker, *Tug of war* (Ontario 1984).

[3] L. de Jong, *Het Koninkrijk der Nederlanden in de tweede wereldoorlog* (Den Haag 1969).

[4] This list was made by my wife Anje, for which I am very grateful.

on Rotterdam as well as on Middelburg took place. The second period was the autumn of 1944 when the allied forces, coming from Belgium, liberated the south of the Netherlands. This military operation stopped near Arnhem, which proved to be 'one bridge too far'. The third period was the spring of 1945 when the rest of the Netherlands was liberated.

Most damaging of Dutch cities took place along the front lines in these three periods. However, outside these periods some Dutch cities were also severely struck by allied forces carrying out air attacks on strategic targets, and unfortunately also by some stupid mistakes.

First period, May 1940

The core of the Dutch defence system was the New Dutch Inundation line (*Hollandsche Waterlinie*), a system of canals, sluices and pumping engines which could inundate the lower parts of the Netherlands. This was combined with a set of fortifications around the strategic cities of Amsterdam and Utrecht. This defence system concentrated on the western parts of the country, which was the most urbanised one. The defence of larger cities in other parts of the country such as Groningen, Arnhem, Nijmegen, 's-Hertogenbosch, Tilburg, Eindhoven and Maastricht had lower priority. There was, however, a second defence system in the south, the Peel defence system (*Peel-Raamstelling*). Moreover most of these cities were situated along rivers where, in case of attack, bridges could be demolished.

May 1940 witnessed the bankruptcy of the inundation system. The German aeroplanes simply crossed it and dropped their parachutists on the airports near The Hague, the seat of the Dutch government, and on the main airport, Schiphol, near Amsterdam. These attacks failed and the German troops were surrounded by Dutch troops, but in Rotterdam, Dordrecht and near Moerdijk, where large bridges connected the west of the country to the south, the German troops succeeded in occupying strategic bridges.

At the same time the German armies attacked along three lines. In the north they moved very quickly and easy; there were only heavy fights at the head of the Afsluitdijk which connected the north to Holland. In the south the river Maas was crossed and the Peel defence system was easily taken. In the middle there was three days of heavy fighting at the Grebbe Hill (Grebbeberg) near the town of Rhenen, east of the inundation line. Rhenen and the towns of Veenendaal en Wageningen for the most part were demolished.

The Dutch ground troops retreated in the west. To enforce capitulation, on 14 May 1940 the Germans launched an air attack on Rotterdam. Since this was the second city of the Netherlands, the damage in Rotterdam was the largest in an urban setting during the Second World War, in absolute rather than in relative terms. 25,000 houses were demolished as well as 2500 shops, 1200 industrial plants, 70 schools, twenty banking offices, twelve cinemas, four hospitals, two theatres and two railway stations.

The centre of Rotterdam 14 May 1940 (collection Gemeentearchief Rotterdam)

As a result the Dutch army surrendered because, otherwise, Amsterdam, The Hague, Utrecht and Haarlem would have suffered the same fate. An exception was made in the province of Zeeland in the south which French troops tried to defend. Here German air raids damaged the harbour city of Flushing (Vlissingen) and the capital city, Middelburg. The historic centre of Middelburg was completely destroyed. The German press blamed the English for the attacks on this 'Hollandisches Rothenburg'. Zeeland capitulated too.

Apart from the cities and towns mentioned above there was also serious damage in the navy harbour of Den Helder and in IJmuiden, situated at the beginning of the large canal connecting the North Sea to Amsterdam, and in the whole of the Netherlands almost no bridges were intact. Amsterdam and The Hague did not have any serious damage, but in The Hague the construction of the Atlantic Wall soon started, a concrete defence line along the coast against possible British invaders. This caused the evacuation and demolition of whole quarters.

Infernal intermezzo

The second period of systematic damage would occur in 1944. But in the meantime some Dutch cities and towns became targets of British air forces. In 1942, for instance, Geleen was attacked instead of Aachen. Bombing also oc-

curred on strategic industries in Hengelo (Stork metal) and Eindhoven (Philips). In Amsterdam a residential quarter was bombed instead of a shipyard, and in Haarlem the bombs missed the railway station and destroyed a residential quarter. Moreover there were almost constant air attacks on shipyards and harbour installations in Rotterdam, Vlissingen, Den Helder and IJmuiden, places which were easy to reach for the Allied forces and therefore were called 'freshmen's targets'.

In 1943 the Americans joined the RAF. Due to scanty geographical knowledge, their air attacks proved much more inaccurate. Some Dutch cities were bombed by mistake: Enschede, for instance. In February 1944 the 'Big Week' was launched, an American offensive against the German aeroplane industry. Due to the lack of geographical knowledge of some pilots, this offensive proved to be fatal for some cities in the east of the Netherlands near the German border. Instead of Dülmen, near Münster, Enschede was attacked again: almost the whole textile industry, situated in the centre of this city, was demolished. Arnhem was confused with Gogh: the Americans intended to bomb fuel tanks in Gogh but struck the gas factory in Arnhem. The most severe damage was caused in Nijmegen, which was mistaken for the German city of Kleef.[5] The inner city and the railway station with its surrounding area were destroyed, 1270 houses vanished, 1000 were injured and about 800 people died, which was almost as many as in Rotterdam in May 1940.[6] In the autumn of 1944 more destruction followed, which made Nijmegen the relatively most damaged larger city of the Netherlands.

Second period. Autumn 1944

After D-Day the Allied forces reached the south of the Netherlands in September 1944. In Zeeland a complicated front line was created to control the supply routes of the harbour of Antwerp, already conquered by the Allied forces. The small town of Breskens was completely bombed and Axel, Aardenburg and Sluis were damaged by the Allied march. More than 5 million bombs and grenades were thrown on the villages and towns in the southwestern parts of Zeeland. The Allied forces inundated the island of Walcheren, where Middelburg and Vlissingen are located.

In fact all towns and cities in the south of the Netherlands became front cities. To disrupt transport, not only airports but also railway stations were bombed (Roosendaal, 's-Hertogenbosch). Eindhoven was bombed by the Germans to stop the progress of the Allied forces. All the church towers in the middle of the south-eastern province of Limburg were torn down by the Germans to hamper the orientation of the Allied troops. The small towns of Zevenbergen, Heusden

[5] In a later on published study was found out that there was no mistake. It was a careless bombing by unexperienced pilots after an unsuccessful raid at Gotha. Some pilots ideed thought that Nijmegen was a German town, but others knew better. See: Joost Rosendaal, *Nijmegen '44, verwoesting, verdriet en verwerking* (Nijmegen 2009).
[6] Korthals Altes, *Luchtgevaar*, ch.9, 330.

and Montfoort were severely struck. In Zevenbergen only one house was not damaged. In the middle of Limburg, where the Allied forces progressed very slowly, the larger towns of Venlo and Roermond lost a great part of their houses, factories and public buildings.

The march of the Allied forces stopped at the river Rhine, where operation Market Garden, Montgomery's attempt to cross the Rhine, failed. The city of Arnhem was the victim of this. During the battle of Arnhem this city and its satellite town Oosterbeek were evacuated and for the most part destroyed. Nijmegen, situated south of Arnhem along the river Waal, was liberated but there was still less left of the inner city than after the bombing. The Germans had burnt it down to improve sight.[7]

Between October 1944 and February 1945 the ground troops did not move. Still some cities were damaged, especially by RAF attacks on strategic targets such as Zutphen, Deventer (the bridge across the river IJssel remained intact), Hengelo (city centre), Dordrecht and Amsterdam (bureaus of civil registration) and Utrecht (railway junction and the adjacent academic hospital). Eventually the air attacks diminished because of the battle in Belgium (Bastogne) which diverted the air raids to the south. Moreover, due to a general strike of the Dutch railway employees, the railway stations, for the greater part situated in densely populated quarters, ceased to be strategic targets.

However, a new phenomenon manifested itself, the German V1 and V2 rockets. The V1's were launched from bases in the east of the Netherlands, mainly in the direction of Antwerp. 1800 of them passed over the city of Tilburg; 37 came down there. The efforts of the Allied forces to eliminate the launchers caused the bombing of the towns of Hellendoorn and Rijssen.

The V2's were launched in Wassenaar in the west of the country near The Hague. The bombing of their bases was accompanied by the devastation of a densely populated quarter of The Hague (Bezuidenhout) where 500 people died and 3000 houses were destroyed.

Third period. March 1945

The Allied march to the north and the west of the Netherlands, led by Canadian troops, started in March. They almost surrounded the west of the country, which caused the demolition by the Germans of many strategic elements in cities: for instance what was left of the harbour installations in Rotterdam. The march to the north went rather quickly which reduced the damage. Still, some cities, such as Doetinchem, which until then had remained intact, now were struck. The largest city in the north, Groningen, experienced a real urban guerrilla battle, which caused large fires and destruction in the city centre and in some outskirts.[8] Deventer, Zutphen and Enschede were bombed again. For Coevorden it was the first time. In the eastern part of the province of Groningen,

[7] A. Lammerts van Bueren, *Oorlogsrampen over Nijmegen* (Nijmegen 1946).
[8] G.J. Ashworth, *The city as battlefield. The liberation of Groningen, April 1945* (Groningen 1995).

near the German border, heavy fighting caused the demolition of some villages and considerable damage to the towns of Appingedam and Delfzijl.

Eventually the Germans surrendered. The capitulation was signed in a hotel in Wageningen, amidst the ruins dating from the beginning of the war.

The Stoeldraaiersstraat in the centre of Groningen after the explosion of a German car filled with munition on 14 April 1945 (collection Groninger Archieven/author)

Some analysis

There is not much theory on warfare and the city in contemporary times. As we have seen above, during World War II most damage to Dutch cities was caused by air attacks. An interesting framework in which to consider air attacks is offered by G.J. Ashworth in his *War and the city*.[9] According to Ashworth there are two main motives for air attack: a) strategic, i.e. to eliminate strategic elements such as airports, bridges and factories, and b) tactical, i.e. to demoralise and unnerve the enemy.

The tactical tradition started in 1849 with the bombing of Venice by Radetski. He used bombs attached to balloons. In the Netherlands the attacks on Rotterdam and Middelburg are the only examples fitting this motive. In Germany, however, the RAF operated from the tactical motive starting in 1942, in the attack on Lübeck. The success of these operations was expressed in the number of square acres devastated. The nuclear bombing of Hiroshima and Nagasaki also had this tactical background.

[9] Ashworth, *War and the city* (London 1991), ch.6.

Most air attacks on Dutch cities, therefore, were strategic. Bridges, airports, harbour installations, railway stations and strategic factories were the main targets. But since they, for the most part, were situated nearby or inside cities, residential quarters of these cities were often also hit. Later on in the war, German headquarters, especially of the *Sicherheits Dienst* and offices of the Civil Registration where the deportations of Jewish people were planned, became special targets for precision attacks. In many cases adjacent buildings were also hit, for instance in The Hague/Scheveningen, Amsterdam and Dordrecht.

Therefore cities as such were in most cases not the first goal of the air troops. The attacks were related to specific urban functions, especially the functions of traffic junction, political centre and concentration points of industrial production.

The ground troops in most cases even tried to avoid warfare in the cities. Again according to Ashton this was for five reasons: 1) small operating units; 2) close-range weaponry because of bad visibility; 3) the presence of civilian lives and property; 4) defensive bias (in cities the attack-defence manpower ratio was about 10:1, while in rural areas this was 3:1); and 5) absorption of manpower, because of the fact that many more soldiers and resources were needed.[10]

One could add to this list the fact that it was no use for the armies to conquer a demolished and disorganised city. In any case, even when cities were strategic goals, in the era of the fortified city, it was tradition not to fight in cities. Attackers as well as defenders respected this tradition. Once the walls were crossed or the gates were demolished, the keys of the city were offered to the enemy. It might have been that a residue of this opinion protected many Dutch cities from severe damage.

Some conclusions

As we have seen now, many Dutch cities and towns were damaged by air attacks. The battle on the ground also caused considerable damage, but urban guerrillas were avoided until it was inevitable, as in the cases of Arnhem and Groningen and some smaller towns along the front lines. Most damage was done to cities situated along the front lines in the beginning and the end of the war, and to cities and towns which had special strategic functions. In fact, Middelburg and the cities that were bombed by mistake were the only exceptions.

One may pose the question of whether Dutch cities were severely hit. Compared to German cities this was not the case, but according to the historiographers of some individual cities it was. Let us consider some facts. Most damage was done in the province of Zeeland where 16.6% of the houses were demolished. In Gelderland this was 10.6%, while in all other Dutch provinces it was less than 10%.[11] Even in Nijmegen 'only' 10.6% of all houses, factories offices, schools and other public buildings were severely damaged, 58.3% were slightly

[10] Ashworth, *War and the city*, ch.5.
[11] De Jong, *Koninkrijk der Nederlanden*, volume 10B, 1443.

damaged, and the rest were not struck at all.[12]

Of the six largest cities of the Netherlands - having, according to the census of 1947, more than 100,000 inhabitants - only Rotterdam was severely damaged. Amsterdam remained rather intact, except for the harbour area. The Hague lost one residential quarter and was cut by the Atlantic Wall. Utrecht had some damage near the railway station, and Groningen lost its centre but the other parts of the city remained rather undamaged.

More damage was done to the 12 cities with 50,000 – 100,000 inhabitants. This was of course the case in Arnhem and Nijmegen, but also in Enschede, Eindhoven and Tilburg, and to a much lesser extent in Dordrecht and Maastricht On the other hand, Apeldoorn, Hilversum, Delft, Leiden and Schiedam are hardly mentioned in the records on war damage.

Measured in square meters, the most damage occurred in Rotterdam, Arnhem and Nijmegen, but still the greater parts of these cities survived the war. This was also the case in Middelburg. However, some smaller towns like Breskens and Aardenburg almost completely disappeared. In Tiel, near Arnhem and Nijmegen, only five houses out of 3000 remained undamaged. It was there that after the war it took the most work to restore the former urban structure.

So we must conclude that while in many cities, towns and villages there was some war damage, only in a minority were the pre-war urban functions and morphology seriously damaged.

Epilogue. After the war

The reconstruction of the damaged Dutch cities is an interesting story that can only be outlined in this contribution. This reconstruction was accompanied by a discussion among architects and city planners about whether the past should be reconstructed or a new modern city should be planned. The discussion was dominated by the modernists: architects and planners like C. van Eesteren, J. Bakema, J.H. van den Broek , H.A. Maaskant, J.J.P. Oud and adepts of the Delft school headed by M.J. Granpré Molière, professor at the polytechnic in Delft.

In Rotterdam the modernists won. The city was reconstructed as a modern metropolis, responding to the needs of modern traffic and business.[13] Only the church was carefully rebuilt as well as some old houses along the harbours. Middelburg, however, was reconstructed and in part carefully restored in its old setting, with some adaptations for traffic.[14] In Arnhem the reconstruction took place along modernist lines. Even the demolished church took on a modern concrete appearance.[15] In Nijmegen the rebuilding started in a modernist way. The new railway station, however, was built in Delft style. Since in Nijmegen the reconstruction lagged somewhat behind, a switch occurred in the direction

[12] Calculated from Lammerts van Bueren, *Oorlogsrampen over Nijmegen*, 125-128.
[13] Cor Wagenaar, *Welvaartsstad in wording. De wederopbouw van Rotterdam 1940-1952* (Rotterdam 1992).
[14] M.P. de Bruin, *Ontwikkeling van de volkshuisvesting in Middelburg* (Middelburg 1983).
[15] Bob Roelofs, *Vernieling en vernieuwing. De wederopbouw van Arnhem 1945-1964* (Utrecht 1995).

of reconstructing the past. The waterfront was rebuilt in a more nostalgic way.

In Groningen, initially Granpré Molière was nominated as the supervisor of the reconstruction of the city centre. His plans were rejected and the central square was rebuilt in a modernist way under the strong influence of the architect J.M.Vegter, who also was an important architect in the rebuilding of Arnhem.

Almost every Dutch city that was damaged by the war reflects the controversy between the modernists and the Delft school. The outcome for the most part was determined by the composition of the Municipal Council. Sometimes the church tower was rebuilt as a concrete modern 'Gedächtniskirche'; sometimes the old building was carefully restored. In the medium-sized cities such as Zutphen, Enschede and Hengelo, the railway station was usually built in a modern way, while the surrounding neighbourhood reflected Delft influences. Sometimes, however, the new railway station was built in an historic style, like in Nijmegen, as already has been mentioned, as well as in 's-Hertogenbosch and Vlissingen.

Still the contrast between the damaged and the undamaged cities vanished. The Dutch Railway Company started to replace railway stations in a number of cities where the capacity lagged behind population growth. And, in many cities, slum clearing, the upgrading of quarters and reconstruction in favour of traffic movement took more square meters than the war had. In fact, these developments and the removal of fortifications at the end of the nineteenth century were greater determinants of urban morphology than the Second World War. Rudger Smook, who analysed the transformation processes in 28 larger cities, confirms this. According to his view the fundamental destruction by the war of the old urban tissue only took place in Rotterdam, Arnhem, Nijmegen and Venlo.[16] In all other cities the reconstruction did not change much of the city plan and image, at least not more than in any other city, because through the years the opportunity to upgrade the city centre became the wish of almost every town councillor. In the city of Groningen, for example, this had remarkable consequences. There the modern town hall of white marble, erected after the war, was demolished and replaced by a more nostalgic set of buildings. Visitors may think that no war touched this city.

[16] Rudger Smook, *Binnensteden veranderen* (Zutphen 1984), 216.

8

The Randstad conurbation: a floating metropolis in the Dutch Delta.[1]

Pim Kooij & Paul van de Laar

The Randstad Holland is not a metropolis in a theoretical sense. It is a conurbation of four big cities - Amsterdam, Rotterdam, The Hague, Utrecht - and at least six smaller ones, which are linked by suburban extensions. We studied the economic, political, social, and cultural dimensions of the Randstad, and found out that in course of time the more ore less complementary centres turned into competitive municipalities, especially in the fields of economics and culture. In fact, within the Randstad two wings can be discerned a north wing - the Amsterdam-Utrecht axis- and a south wing - the Rotterdam-The Hague axis. The more commerce oriented north wing seems to have the best prospects.

Introduction

The word 'metropolis' has many different meanings. Often, it is defined as an internationally oriented city with different spatial-functional complexity and international grandeur, political and economic functions, and a more sophisticated cultural infrastructure than less important cities.[2] Eric Monkkonen regards it as a concentration of superior social, cultural, political and economic qualities, which smaller cities are unable to accumulate.[3] Others look for arguments of a statistical and demographic nature and refer to the metropolis as a town with a radius of 30 kilometres, containing at least 10 million inhabitants.[4] According to this definition the Randstad - the 'Ring City' embracing Amsterdam, Rotterdam, The Hague and Utrecht - is not a European metropolis in the sense that Paris and London are. In fact, the Randstad consists of four urban conurbations surrounding a central sparsely populated green area, which is called the Green Heart of

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[1] First published in Henk van Dijk (ed.), *The European Metropolis 1920-2000*. Proceedings of a Conference at The Centre of Comparative European History (Berlin 2002). http://ep.eur.nl/handle/1765/1028.

[2] Han Meyer, *De stad en de haven, stedebouw als culturele opgave. Londen, Barcelona, New York, Rotterdam: veranderende relaties tussen stedelijke openbare ruimte en grootschalige infrastructuur* (Utrecht 1996).

[3] L. Brunt, 'Metropool aan de Maas: een beschouwing over het stedelijke karakter van Rotterdam', in *Economie, economie en nog eens economie. Slotadvies van de Werkgelegenheids Adviesraad van de Gemeente Rotterdam 1995-1998* (Den Haag 1998) 121-142.

[4] SMO (Stichting Maatschappij en Onderneming), *De opkomst van de steden van Holland. De Randstad in de informatiemaatschappij* (Den Haag 1997).

the Netherlands. Van Rossum compares the Randstad with the loose, informal organisation of Los Angeles, a combination of suburbs without a dominant city.[5]

The Randstad has a special place in the debate on the European metropolis because its concept does not fit well into existing models of the city. Peter Hall referred to the Randstad in the 1960s as 'an open metropolis', designed to meet modern urban spatial needs such as vast green zones and infrastructural connections between the cities and their suburban surroundings.[6] However, Hall's forecasts of substantial and lasting population growth in the urban areas were too optimistic. Whereas Paris and London indeed grew into open metropolises, the Randstad did not. Post-industrial developments, increasing sub-urbanisation in the Randstad zones, de-industrialisation and changes in economic structure radically changed the spatial needs of the Randstad.[7] In fact, the end of the 1980s saw the introduction of the concept of the Randstad as a 'deconcentrated world city', an agglomeration of cities of an intermediate size, but as a whole substantial enough to be compared with the real European metropolises.

The Fourth Policy Document on Physical Planning-Plus (VINEX), a blueprint for spatial planning in the Randstad, aimed for the realisation of an integral public transport system, connecting the ring cities and the mainports of Amsterdam (Schiphol) and Rotterdam (Port of Rotterdam) with other Randstad cities. However, environmental groups are lobbying to protect the Green Heart and to restrict the number of houses and economic activities within it. These facts have placed doubt on the reality of the concept of the 'deconcentrated city'.[8] De Boer rejects the concept of the Randstad as a 'deconcentrated world city' because it contradicts the basic aspect of a metropolis, i.e. occupying a central position in a global network.[9]

In recent years the discussion on the Randstad has focussed on the decentralisation of economic activities and the segregation of the economic landscape into two wings: the south wing (the Rotterdam-The Hague axis) and the north wing (the Amsterdam-Utrecht axis). From the 1960s onwards, regional spatial planning was based on this division. Since the 1990s, the economic prospects of the north wing - in particular the mainport Schiphol - have been regarded as better than those of the south wing.[10] Is it possible that Amsterdam, once one of Europe's ten largest cities, will become the metropolis of the Randstad - on the basis of its comparative economic and cultural advantages - as it once was in the seventeenth and eighteenth centuries? This raises two main questions:

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[5] Vincent van Rossum, *Randstad Holland, variaties op het thema stad* (Amsterdam 1995).

[6] H. van der Cammen, 'Wat kunnen we leren van de Noordvleugel' in *Economie, economie en nog eens economie. Slotadvies van de Werkgelegenheids Adviesraad van de Gemeente Rotterdam 1995-1998* (Den Haag 1998) 65. Refers to Peter Hall, *The World Cities* (London 1966).

[7] G.A. van der Knaap, *Stedelijke bewegingsruimte over veranderingen in stad en land* (Den Haag 2002).

[8] Van der Cammen, 'Wat kunnen we leren', 53-70.

[9] Niek de Boer, *De Randstad bestaat niet* (Amsterdam 1996).

[10] Ries van de Wouden & Erica de Bruijne, together with Karin Wittebrood, *De stad in de omtrek. Problemen en perspectieven van de vier grootstedelijke gebieden in de Randstad* (Den Haag 2001).

1. Which long-term historical developments indicate the development of these four urban areas into a real metropolis, comparable with London and Paris, and which long term developments indicate otherwise?

2. What are the causes of the unequal development of different parts of the Randstad, and what are the implications in relation to the first question and the spatial development of the Randstad?

To answer these questions, we will investigate different dimensions of the Randstad in a historical perspective.

The spatial dimension of the Randstad

The term 'Randstad' (literally: 'rim city') was first used in 1938 by Albert Plesman, founder of the Dutch airline KLM.[11] He used the idea of the Randstad in difficult and enduring discussions on the concentration of airport activities in the provinces of North and South Holland. Both Rotterdam and Amsterdam had their own small airports. The Hague used the airport facilities of Rotterdam (Waalhaven). In order to enhance the economic prospects of this new branch of the transport industry, and in particular those of KLM, Plesman pushed forward plans for a single central airport. This should be a central airport for the Randstad. Seen from the air, the big cities in the west of the Netherlands formed a man-made stone rim around a green area. At that time, aircraft did not fly at very high altitudes. Had they done so, it would have been clear that the distances between the individual cities were too large to be able to speak of a ring. This was not the case until after the Second World War.

Looking back over time, the green areas between the cities have become larger. In the mid-nineteenth century, the farmer Jan Freerks Zijlker referred to the large distances between the cities that would eventually form the Randstad. Zijlker came from the province of Groningen in the north of the country.[12] He was a Member of Parliament, and often had to spend the weekend in The Hague because it took too much time to travel back to Groningen.

On Sundays he took the train through the province of Holland to the north. He was struck by the open countryside, which reminded him of Groningen. The train played an important role in the creation of the Randstad. The first railway, between Amsterdam and Haarlem, was opened in 1839. This line was extended to The Hague and Rotterdam in 1847. The 'second rank' cities Leiden and Delft were also connected to this line, while Dordrecht was incorporated in 1872. To the east, the connection between Amsterdam and Utrecht was completed in 1845, while the railways between Rotterdam and Utrecht, and The Hague and Utrecht, used the same railway line extended from Gouda.

These railways paved the way for sub-urbanisation. Along the Amsterdam-Utrecht line in particular, some of the villages turned into exclusive residential areas (Baarn) or towns (Hilversum) as early as the nineteenth century. Around

[11] A. van der Valk, *Het levenswerk van Th.K van Lohuizen* (Delft 1990).
[12] J.W. Formsma (ed.) 'Het dagboek van Jan Freerks Zijlker' in *Groninger Volksalmanak* (1948) 83-221.

the turn of the century, the same thing happened in the Rotterdam–The Hague area. As we will see later, many wealthy inhabitants of Rotterdam moved to The Hague but continued to work in Rotterdam. A second railway - this time an electric railway - played an important part in this, also because it terminated in Scheveningen, a coastal village that has now become a suburb of The Hague.

Yet the railway was not the first integrating form of infrastructure. The first was the barges. In the sixteenth and seventeenth centuries in the south-west and north of the Netherlands, an integrated network of canals (*trekvaarten*) was built, connecting all the main cities. Initially, a network was built around Amsterdam and Utrecht, and another one around The Hague and later on Rotterdam. In the late 1660s, these two networks were joined. Amsterdam gained the most central position.[13] However, with the arrival of the railway, the barge system disappeared almost immediately. Although the barges were superseded, they did perform an important preparatory function in that many railway lines were constructed along the old canal routes. In fact the barge network, which reflected the historic Amsterdam-centric economy, lost its importance as early as the eighteenth and the beginning of the nineteenth century. As a result of the decline of the Amsterdam staple market, many people left the city. The same happened to the industrial cities of Haarlem, Leiden and Delft, which were closely linked to Amsterdam. All these cities had to survive as central places for their hinterlands.[14]

Another integrating factor was the creation, from 1813 on, of the *Nieuwe Hollandsche Waterlinie*. This was a defence system by which lower-lying land could be flooded while higher areas were controlled by fortifications. This system defended Holland, the western part of the Netherlands and the city of Utrecht. As a result, the cities in this area no longer needed their ramparts. Therefore, while cities in other parts of the Netherlands remained within the confines of their fortifications until 1874, the cities in the west were able to expand at an earlier stage. Sub-urbanisation could also start earlier.

According to Engelsdorp Gastelaars and Wagenaar, the birth of the Randstad was primarily the result of sub-urbanisation.[15] Enterprises, organisations, and households made increasing claims on space because of the more capital-intensive character of industry, the specific and growing number of tasks of organisations, and the wish of individuals to have more privacy. One could add the growing population to this list. In 1900 the population of the Netherlands was 5 million. Today it is more than 16 million, of which 6 million live in the Randstad area. Already before the Second World War, railways and tramways ceased to be the main facilitators of sub-urbanisation. Their role was largely taken over

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[13] Jan de Vries, 'Barges and capitalism. Passenger transportation in the Dutch economy, 1632-1839', *A.A.G. Bijdragen* 21 (Wageningen 1978) 72.
[14] Sako Musterd & Ben de Pater, *Randstad Holland. Internationaal, regionaal, lokaal* (Assen 1992) 3.
[15] R. Engelsdorp Gastelaars & M. Wagenaar, 'The rise of the 'Randstad', 1815-1930', in H. Schmal (ed.)*Patterns of European Urbanisation since 1500* (London, 1981), 229-247.

by cars and buses. This stimulated sub-urbanisation in places that, before that time, were not easily accessible.

Engelsdorp Gastelaars and Wagenaar argue that sub-urbanisation did not contribute to the growth of the central city but to its surrounding suburbs. It is not clear what this means in the context of our questions. Could this be a positive element for the creation of an integrated metropolis, not torn by the competition of separate centres, or would this result in an anonymous sea of houses, having less identity than Los Angeles? For the moment we cannot be more specific on this point but we will return to it later, after analysing the individual large cities of the Randstad. However, we should mention that, in earlier studies, Utrecht is not mentioned as part of the Randstad. The Randstad was usually represented as a horseshoe, but nowadays it is a ring.

The economic dimension of the Randstad. Changes in the nineteenth-century urban hierarchy

Expansion is only necessary when new activities develop. This is what happened in the second half of the nineteenth century, when the Netherlands began to industrialise. Dutch industrialisation was largely an urban phenomenon. Moreover, some cities developed new functions in commerce. As a result almost all cities showed exceptional growth:

Tabel 8.1: Urban growth in the Randstad

	Amsterdam	Rotterdam	The Hague	Utrecht	The 'Big Four'
1795	211,000	53,212	38,433	38,294	340,939
1850	224,235	88,812	72,467	47,927	433,441
1900	510,853	318,507	206,022	102,086	1,137,468
1950	845,266	684,658	571,853	195,121	2,296,898
2000	731,288	592,673	441,094	233,667	1,998,722

Source: Ramaer, *Geschiedkundige atlas* 231-272, Statistical Yearbooks (1851), 5; (1951), 5; (2001), 50-55.[16]

Table 8.1 shows that Rotterdam and The Hague grew much faster than Amsterdam in the nineteenth century. In contrast to Paris and London, Amsterdam in fact lost its leading position in the national urban hierarchy when certain functions were taken over by Rotterdam and The Hague.

In the third quarter of the nineteenth century, Rotterdam began to benefit from its favourable geographic location and investment in an efficient port infrastructure.[17] The central government started by constructing the *Nieuwe Waterweg* (1864) – an open waterway linking Rotterdam to the sea – and also by building a

[16] J.C.Ramaer, *Geschiedkundige Atlas van Nederland. Het Koninkrijk der Nederlanden (1815-1931)* ('s-Gravenhage 1931); Departement van Binnenlandsche Zaken, *Statistisch Jaarboekje voor het Koningrijk der Nederlanden* ('s-Gravenhage 1851). Centraal Bureau voor de Statistiek, *Statistisch Zakboek 1951-1952* (Utrecht 1952); Centraal Bureau voor de Statistiek, *Statistisch Jaarboek 2001* (Voorburg/Heerlen 2001).

[17] Paul van de Laar, *Stad van formaat. Geschiedenis van Rotterdam in de negentiende en twintigste eeuw* (Zwolle 2000).

railway between Rotterdam and the south of the Netherlands. From 1870 onwards, the local government started its own investment programme and participated in private port development on the south bank of the river Maas, based on the example of the London docks. Today it forms part of a huge waterfront redevelopment scheme.

From the mid-1880s, three river docks, *Rijnhaven, Maashaven* and *Waalhaven* (the Rhine, Meuse and Waal docks) were built. This development reshaped the river landscape south of Rotterdam. The new transit port system was a strategic response to the demands of an industrial age. However, apart from maritime industry, there was little industrialisation in the Rotterdam area. The primacy of shipping, Rhine traffic and cargo handling reduced the possibilities of more diverse large-scale industrialisation.

The Hague remained the seat of the Dutch government, as it had been in the days of the Republic, and the now restored monarchy. Transferring these functions to Amsterdam was not advocated because of The Hague's historical diplomatic and administrative status, with its parliament building, embassies and palaces. Moreover, there was already a new seat of government - Brussels - and the Amsterdam magistrates had quarrelled frequently with the House of Orange in the past.

The political functions of The Hague attracted many related occupations, such as domestic servants, purveyors of luxury goods, coachmen, etc. Many of the old provincial elite moved to The Hague to settle near the royal court, as did those who returned from the Dutch East Indies. Moreover, The Hague developed an important industrial sector, comprising metal processing, food and printing activities.[18] Utrecht, by contrast, developed new commercial activities and became the railway centre of the Netherlands.

Amsterdam remained the largest city. In the first half of the nineteenth century, its industrial growth was based on the expansion of the staple market. From the 1850s onwards, the growing Dutch market stimulated Amsterdam's industrial growth. The port of Amsterdam remained crucial because many new industries relied on suitable port facilities. The profitability of shipyards, sugar refineries and the metal industry depended on the availability of cheap raw materials and semi-finished products. The relative economic importance of colonial goods diminished as industrialisation continued in the last decades of the century, but the port function of Amsterdam remained important, albeit to a lesser extent than in Rotterdam. It is therefore no surprise that improvement of railway infrastructure and construction of a new waterway connecting Amsterdam with the North Sea, the *Noordzeekanaal*, was extremely important. Without the new waterway, Amsterdam would not have been able to benefit from the development of modern large-scale industries. From the 1880s onwards, the development of Amsterdam's urban economy was heavily influenced by dominant banking, insurance and

[18] P.R.D. Stokvis, *De wording van modern Den Haag* (Zwolle 1987).

modern shipping-line enterprises, which had a strong base in the Dutch East Indies.[19]

According to Engelsdorp Gastelaars and Wagenaar, the three largest cities of the Netherlands became more or less complementary during the nineteenth century. However, considerable urban rivalry remained. The serious political controversies between Amsterdam and Rotterdam related to infrastructural issues (the construction of railway connections to the south, Rhine-traffic canals and the *Nieuwe Waterweg* and *Noordzeekanaal*). Urban rivalry continued into the twentieth century, especially between Amsterdam and Rotterdam, and to a lesser extent between these cities and The Hague after 1945. Urban rivalry arose from Rotterdam's plans for 'maritime industrial development areas' that involved large investments by the national government to optimise Rotterdam's accessibility from the North Sea.[20] Because of Rotterdam's construction of vast complexes for the growing port-dependent petrochemical industry, the port metropolis became the maritime, transhipment and industrial centre of the Netherlands in the early 1960s. The other cities objected to the economic primacy of Rotterdam. In particular, relations between Amsterdam and Rotterdam cooled as port development in Amsterdam lagged behind.

In 1962 Rotterdam celebrated the fact that it had become the biggest port in the world. The port metropolis had by then developed into an area covering 10,000 hectares, with an extension of approximately 40 kilometres extending from the city of Rotterdam towards the Hook of Holland. In 1969 Rotterdam presented *Rotterdam 2000+*. Today, this plan may be looked upon as mere fantasy. The southern part of the province of South Holland was still predominantly agricultural and was to be reshaped into industrial docks and infrastructure for road and rail. Two airports were planned and a new town, which would eventually accommodate 500,000 inhabitants. The plan radiated the spirit of progress and reflected a faith in the continued economic growth of Rotterdam. *Rotterdam 2000+* was rejected by the public and consequently cancelled because of its public rejection, which signalled the end of an era dominated by industrial considerations.

The publication of *Rotterdam 2000+* coincided with a report by the Club of Rome. Both reports brought about a discussion on the social costs and benefits of port expansion.[21] The people living in this heavily polluted and industrialised Rijnmond region had had enough of programmes that spoiled their environment. The change in the political climate and the rising influence of environmental pressure groups worked against Rotterdam. Moreover, the economic depression that followed the first oil crisis of 1973 brought an end to a period of

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[19] J.L. van Zanden, *De industrialisatie in Amsterdam 1825-1914* (Bergen 1987).

[20] A. Vigarié, 'Maritime industrial development areas: structural evolution and implications for regional development': in B.S. Hoyle en D.A. Pinder, *Cityport industralisation and regional development. Spatial analysis and planning strategies* (Oxford/New York 1981) 23-36; Ton Kreukels & Egbert Wever, 'Dealing with competition: the Port of Rotterdam', *Tijdschrift voor Economische en Sociale Geografie*, Vol 87 (1996), 293-309.

[21] Van der Cammen, 'Wat kunnen we leren'.

optimistic growth expectations. As a result of the economic depression, there was a severe decline in trade and volumes of goods distributed through Rotterdam - the gateway to Europe. After the first oil crisis, Rotterdam experienced the effects of the over-saturation of the oil and petrochemical industries, which were the leading sectors in the boom of the fifties and sixties. The growth potential of the petrochemical industry, which in turn drove the urban and regional economy, slowed down in the 1970s. The most serious effects were brought about by the shakeout in the shipbuilding and metal industries, which had been largely dependent on these sectors. Economic growth and port expansion were no longer synonymous.

In retrospect, Rotterdam's port-development schemes were based on post-war models of industrial growth and on the expectations of rising throughput scenarios of the 1960s. However, the 1970s saw a drastic change in the international economic landscape, in contrast to that of the 1950s and 1960s. In a relatively short period of time, the international economy shifted from large-scale mass production and transport facilities towards more flexible production methods based on modern marketing techniques and knowledge and information networks, focussing on value-added production processes.[22]

The restructuring of the Randstad economy

Rotterdam has a strong position in bulk transhipment and maritime transport facilities. That position is only possible in this part of the Netherlands. There is no doubt that, notwithstanding international developments, Rotterdam will remain a significant port because of its share in European oil transhipment and container handling. In fact, all the scenarios for the economic growth of Rotterdam are based on Rotterdam's position as a logistic mainport. Its recent investment program is also based on these scenarios, although today it is recognised that other ports in the Hamburg-Le Havre-range are now more competitive.

The changes in the international economic climate resulted in a process of spatial deconcentration, as the assembly plants and distribution centres of international companies were relocated to other areas. The ideal location depends on many factors, of which port and transhipment costs are only two. Measured in terms of relative transport efficiency, the geographic location of Rotterdam is not unique. Other port and distribution areas are also attracting foreign investors. Schiphol airport, which is part of the north wing of the Randstad, is relevant in this respect.[23] In fact, the roles have changed. Rotterdam's economic performance was ahead of the field in the 1960s and 1970s, the period during which the first generation of mainport functions - based on large-scale mass production and

[22] Å.E. Andersson, 'Presidential address: the four logistical revolutions', *Papers of the regional science association* Vol. 59 (1986) 1-12; Å. E, Andersson, 'Infrastructure and the transformation of the C-society', in R. Thord (ed.) *The future of transportation and communication* (Stockholm 1992) 17-30; A. Grübler, *The rise and fall of infrastructures. Dynamics of evolution and technological change in transport* (Heidelberg 1996); Van der Cammen, 'Wat kunnen we leren'.

[23] Kreukels & Wrever, 'Dealing with competition'.

transhipment and to a lesser extent on high value-added production processes - were developed. From the 1980s onwards, however, the Amsterdam region held all the trump cards. Schiphol - a second-generation mainport - stands for glamorous new products, high value-added international business, information networks and the leisure economy. In addition, Amsterdam has always been the financial centre of the Netherlands, a fact that was of great importance in the 1980s and 1990s. Amsterdam was one of Western Europe's 'fast-changing leaders'.[24] The Rijnmond's contribution to GNP fell from 12% in 1970 to 9% in 1985, and has continued to fall.[25]

The case study of the north Randstad region and Schiphol shows that, in addition to transport costs and government subsidies, tax and investment benefits, housing and living conditions, cultural facilities and abundant supply of labour have become more relevant than before. In this respect, Rotterdam has more difficulties than other cities in the Randstad. This relates to path dependency, since historical differences in economic structure are significant. Employment in Rotterdam and its adjacent areas fell sharply as the shipping industry declined. Many dockworkers also lost their jobs as a result of mechanisation and containerisation. In this respect, it is relevant to examine the structure of the total working population in the Randstad cities.

Table 8.2: The structure of the working population in 1985 (%)

	Amsterdam	Rotterdam	The Hague	Utrecht
Industry	11	18	10	13
Building and construction	3	7	4	6
Trade	18	19	17	15
Transport	9	14	8	8
Commercial and financial services	16	9	14	11
Social and administrative services	42	32	44	46

Source: Bargeman et.al., *Structuur en Dynamiek*.[26]

Table 8.2 shows that Amsterdam, The Hague and Utrecht have strong positions in the social and administrative sectors. Many administrative and public services are based in The Hague, which has become increasingly dependent on the number of jobs generated by central government. In Amsterdam, commercial and financial services are particularly dominant. Rotterdam has the largest share of transport services and a significant share in trade. However, what these statistics do not tell is that most of these jobs are less well paid than jobs in other service-related industries. Utrecht benefits from its central location in the Randstad and

[24] Van der Cammen, 'Wat kunnen we leren'.
[25] Musterd & de Pater, Randstad Holland, 90.
[26] C.A. Bargeman, E. Lensink, L. Van der Laan, and O.A.L.C Atzema, *De structuur en dynamiek van de beroepsbevolking in de Randstad* (Den Haag 1991).

is therefore an attractive area for firms. This became particularly evident in the early 1990s (see below).
Rotterdam has a less diversified economic structure than Amsterdam, and its relatively weak position has not improved significantly since the mid-1980s. As table 8.3 shows, Rotterdam has a low labour participation rate compared to the other Randstad cities.

Table 8.3: Labour participation rates in the Randstad, 1987-1997 (working population aged 15-64 as a % of total population)

	1987	1990	1997
Amsterdam	49	55	54
Rotterdam	49	49	49
The Hague	55	51	58
Utrecht	50	52	55
Netherlands	52	55	57

Source: Dercksen, *Bedrijfsleven, beroepsonderwijs*, 299.[27]

The participation rate of Rotterdam is not only lower than the other Randstad cities, but has also remained stable, as table 8.3 shows. The Dutch economy showed remarkable growth figures in the 1990s, but the fact that Rotterdam's participation rate remained rather stable is a result of its less diversified economic structure. In fact, this points to the fact that the Rotterdam labour market has not adjusted to the changing economic climate. This also has serious consequences, in particular the recent selective migration processes, which will be discussed below.

Table 8.4 shows the differences between Amsterdam and Rotterdam in the 1990s. The table is based on distinctions in social status and the distinction between the traditional ('Fordist') industrial economy and the new ('post-Fordist') service economy.[28] Both cities show the effects of the de-industrialisation of their economies, but the decrease in Rotterdam is less pronounced than in Amsterdam: a reduction of 2.8%, whereas the share of Fordist functions in Amsterdam was more than 5%. The reduction in Fordist employment in Rotterdam was a result of the decrease in the number of office workers in industrial enterprises. Between 1992 and 1996, the number of employed persons in Amsterdam increased by more than 15,000, while in Rotterdam, fewer than 1,200 extra jobs were created in the 'new' service economies. This difference is of course related to the stronger position of Amsterdam in consumer, producer, social and administrative service sectors, as we have seen from Table 8.3.

The Rotterdam labour market is less flexible than those of the other Rand-

[27] W.J. Dercksen, 'Bedrijfsleven, beroepsonderwijs en scholing in Rotterdam', in *Economie, economie en nog eens economie*, 297-316.
[28] Jack Burgers & Sako Musterd, 'Understanding urban inequality: a model based on existing theories and an empirical illustration', *International Journal of Urban and Regional Research*, Vol. 26.2 (June 2002) 403-413, 408.

stad cities are, although the differences between Rotterdam and The Hague are less pronounced than the differences between Rotterdam and Amsterdam or Utrecht. The relative share of inhabitants with a lower education in Rotterdam is higher than in the other cities as well. In the period 1991-1993, more than 50% of its working population had low qualifications; 16% of them have only followed primary education.[29]

Table 8.4: Social status of employed persons in Amsterdam and Rotterdam, 1992 and 1996 (%)

	1992	1996	difference	1992	1996	difference
Managers	9.0	8.7	-0.3	9.1	9.7	0.6
Office workers	21.9	20.9	-1.0	21.5	18.4	-3.1
Sales personnel	9.1	8.4	-0.7	7.6	7.5	-0.1
Skilled manual workers	8.0	6.2	-1.8	9.6	9.0	-0.6
Unskilled manual workers	5.5	4.1	-1.4	8.4	8.8	0.4
total fordist	53,5	48,3	-5,2	56,2	53,4	-2,8
Professionals	18.9	21.7	2.8	14.6	15.9	1.3
Semi-professionals and technicians	15.1	16.3	1.2	16.5	17.4	0.9
Skilled service workers	5.1	5.2	0.1	4.4	6.1	1.7
Unskilled service workers	7.3	8.4	1.1.	8.3	7.2	-1,1
total postfordist	46,4	51,6	5,2	43,8	46,6	-2,8
Number	333.619	349.332	15.713	251.101	252.290	1.189

Source: Burgers & Musterd, 'Understanding urban inequality', 408.

Rotterdam has not been successful in preventing its more highly educated inhabitants from moving to other areas. The port-related industries lack the glamour of, for example, the high-ranking services and banking institutions that are concentrated in the Amsterdam region. Amsterdam attracts more professionals and members of the middle class. This fact in itself has had a strong positive effect on the creation of new jobs in service-related fields.

Van der Knaap has analysed the relatively stronger position of Amsterdam's financial, consumer and other related service industries towards Rotterdam.[30] His results show that commercial and other services (accounting, IT services and engineering) are concentrated in the larger cities (more than 50,000 inhabitants). Compared to the national average location quotient (NL =100), the average location quotient for the big cities is 1.22, which means that these firms are more widely represented in cities than in other areas of the Netherlands. Within the Randstad hierarchy, Amsterdam ranks second (1.27), with Utrecht in first place (1.33). The respective location quotients of The Hague (1.17) and Rotterdam (1.04) are below the average for all cities with more than 50,000 inhabitants. Although Amsterdam and, in particular, Utrecht attract substantially more new

[29]Dercksen, 'Bedrijfsleven, beroepsonderwijs en scholing'.
[30] Van der Knaap, *Stedelijke bewegingsruimte*, 89-94.

services than The Hague and Rotterdam, Van der Knaap's results show that the concentration lies in the Randstad's suburban zones. This means that the conditions for these new services are not created in central locations such as the Randstad cities, but in the central locations together with their surrounding suburban areas. As Amsterdam and Utrecht generate more services in general, many of these promising new IT and financial enterprises are located in city networks linked to these major cities. The Rotterdam–The Hague axis is less competitive than the Amsterdam–Utrecht axis. Rotterdam and The Hague generate less high-value industrial activity. However, The Hague still has the advantage that public services are concentrated there.[31]

Political dimensions of the Randstad

Before 1900, there was virtually no government involvement in urban and regional planning. In most cities, private-housing corporations developed and built the bulk of the urban settlements and new housing districts. Apart from rather restricted building and safety regulations, city governments were slow to adapt and change the existing infrastructure. In particular, it took a great deal of effort before local governments modernised paving, the water supply and began constructing proper sewage systems. At the same time, the boulevards constructed in the Randstad cities were less modern than in other European cities. Even Amsterdam, once celebrated for its urban beauty as a real European metropolis, fell into discredit. Around 1850, Amsterdam became notorious for its poor infrastructure, the result of local authority lethargy and a poorly functioning department of public works.[32]

In the third quarter of the nineteenth century, the urban fabric of the Randstad cities began to be reshaped and more attention was paid to urban planning. The Housing Act of 1901 was of great importance in increasing central-government involvement in urban housing and city planning, which became the hallmark of modern cities in the industrial age.[33] Private housing companies still supplied most of the housing in the fast growing Randstad cities, but the Housing Act prevented the uncontrolled and unbridled expansion of unplanned new urban zones and districts. The Act demanded that any urban development should be based on town planning commissioned by the municipality. Town planning, however, was considered a 'management tool' for preventing unlimited urban expansion, but new ideas on social-democratic planning and modernist ideas were taking hold. Amsterdam's leading architect H.P. Berlage was extremely important in this respect. His plan for Amsterdam-South (1915), in particular his modern ideas on the use of parks and green zones, set the standard for the Randstad.

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[31] Van der Woude & de Bruijne, *De stad in de omtrek.*

[32] Ida Jager, *Hoofdstad in gebreke. Manoeuvreren met publieke werken in Amsterdam 1851-1951* (Rotterdam 2002).

[33] L.A. Klerk, *Particuliere plannen. Denkbeelden en initiatieven van de stedelijke elite inzake de volkswoningbouw en de stedebouw in Rotterdam, 1860-1950* (Rotterdam 1998).

In Rotterdam, W.G. Witteveen was appointed head of the town-planning department of Rotterdam in 1924. He was a leading representative of this new movement. Before World War II he put forward several plans, reflecting the ideas of Berlage and of American architects from the 1920s. Witteveen published his most elaborate plan in 1938. This regional plan visualised the growth of Rotterdam '... as a radial city, radiating urban bands following the main traffic routes'.[34] The plan proposed a scheme for industry whereby the distance from the inner city determined the type of industry to be established. Industrial activities had to be brought together in industrial zones. The city centre would function as a magnetic field, as a centre for small businesses, commercial and financial activities. The importance of the city centre had been neglected, as most historians on planning and architecture regard the Amsterdam General Plan (*Algemeen Uitbreidingsplan voor Amsterdam*) of 1935 as the first truly modern plan.

Berlage also drew up a plan for The Hague, but the local authority did not give him the opportunity to unite the industrial city built on the peat lands and the representative city built on sand. Later, the modernist W.M. Dudok was also frustrated in his plans.[35]

The focus on regional planning was the consequence of the problems the Randstad cities faced in organising administrative units and co-operation with towns and villages. Amsterdam and Rotterdam annexed several neighbouring villages and towns. In the 1920s in particular, Amsterdam, Rotterdam and The Hague developed major annexations plans. The provincial government of North Holland endorsed Amsterdam's plan (an addition of 11,460 hectares, 2½ times its urban area), but the provincial government of South Holland rejected Rotterdam's proposal of 1927. Rotterdam had hoped to increase its economic influence in the region in order to safeguard port expansion and industrialisation programmes. Its plan for the annexation of adjacent older cities such as Schiedam and Vlaardingen, and most of the neighbouring villages, generated a great deal of local protest, and provincial authorities responded to this. While Rotterdam's annexation plans foundered in the early 1930s, The Hague was experiencing similar problems. The city ran out of space for housing and, in the east, reached the stone boundaries of the towns of Rijswijk and Voorburg. Several other plans were put forward, ranging from regional districts to economic zones etc., but without an administrative reorganisation the Randstad cities lacked the political power to force their neighbours to co-operate.

The post-war expansion plans increased the problems of cross-border economic activity. For example, Rotterdam was unsuccessful in extending its political and administrative control over neighbouring cities and villages. Co-operation was based on mutual agreement, supervised by the provincial authority of South Holland. In the 1960s, a new administrative experiment was launched: the regional administrative authority, an economic unit consisting of a central

[34] Cor Wagenaar, *Welvaartsstad in wording. De wederopbouw van Rotterdam, 1940-1952* (Rotterdam 1992).
[35] Victor Freijser, *Het veranderend stadsbeeld van Den Haag* (Zwolle 1991).

location – one of the major cities of the Randstad – and the surrounding smaller towns and villages. This allowed the provinces to delegate some of their political and administrative powers to these regional units. Because of Rotterdam's post-war port expansion, the first experiments took place in the Rijnmond area. At first, Rotterdam was convinced that Rijnmond would support its large-scale port and industrialisation plans. In fact, the Rijnmond authority became a critical political forum and questioned the continuing development of Rotterdam's port and industry. In doing so, Rijnmond was of great importance in the protest movement against Rotterdam 2000+ and was a catalyst of political and economic change.

Other cities in the Randstad area faced similar administrative problems. The administrative and political failure of Rijnmond greatly influenced what has happened in other parts of the Randstad since the 1980s. The 1990s saw the appearance of new models. The 'provincial town', a new administrative model whereby considerable political and administrative power was delegated from the provinces to the Randstad cities, seemed to be the answer. In the end, however, there was not enough public and political support. So the Randstad is shared by three provinces, and consists of a large number of municipalities that sometimes compete and sometimes co-operate voluntarily. There is still no clear vision of the Randstad model. Every city has to chart its own course. The Spatial Plan for Rotterdam to 2010, for example, aims to create a 'Delta metropolis': a large conurbation similar to London, the Ruhr Valley and Paris. Considering the ambitions of the other Randstad cities, for example Amsterdam and The Hague, and the central position of Utrecht, it is unlikely that the cities will develop a joint vision on the political dimensions of the Randstad. In order to understand this, it is also important to recognise the social and cultural differences within the Randstad.

The social dimension of the Randstad

In order to answer our central questions, we need to know in what respect the social structures in the four main centres in the Randstad have become complementary or identical. In the first case there could have been some form of residential segregation, with different social classes concentrated in different areas of the Randstad. Migration movements are very interesting in this context because they could accentuate this segregation. If the social structures do not show many differences, it is possible to wonder whether the social relations between the different nodes in the Randstad remained weak.

Few reconstructions have been made of the whole social structure of the individual cities comprising the Randstad during the nineteenth and twentieth centuries. In fact, they only exist in a comparable form for 1842.

Table 8.5 shows considerable differences between the three cities. Rotterdam was the most proletarian city. The Hague had the largest elite but also a large lower-class population. In Amsterdam, the middle classes were relatively sizeable,

and in Utrecht this was the case for the lower classes. Rotterdam and Utrecht had low-income groups for different reasons. In Rotterdam, a large part of the population worked in the harbours, where wages were low. In Utrecht at that time, unemployment was very high because the city's economy was very weak.[36]

Table 8.5. The social structure of four cities in the Randstad in 1842 (%)

	Amsterdam	Rotterdam	The Hague	Utrecht
Elite	15	12	17	12
Upper middle class	22	16	19	18
Lower middle class	33	22	24	19
Tax-paying labourers	25	18	12	10
Non-tax-paying labourers	5	37	22	41

Taxation was based on the value of houses. See Stokvis, *Wording*, 12. His calculations for Amsterdam, Rotterdam and The Hague (including Scheveningen) are based on Blok & De Meere, 'Welstand'.[37] Calculations for Utrecht are by the authors, also based on 'Welstand'

It is impossible to make this comparison for later years, the period of rapid urban development (see Table 8.1). Thanks to Van Dijk, Visscher, and Van de Laar we do know how the social structure of Rotterdam changed.[38] As a port, Rotterdam showed many of the characteristics of other fast-growing nineteenth-century European ports.[39] Rotterdam has always been a centre for migration, in particular for labour migrants and servants. In the first part of the nineteenth century, Rotterdam housed more servants than dockworkers. Migration accelerated in the third quarter of the nineteenth century. Port expansion and urban growth stimulated it. The port attracted many migrants from neighbouring counties, but a large number of them worked as bricklayers, carpenters etc. because many houses were being built for the increasing population. On the other hand, migration was stimulated by the agrarian crisis (1873-1896). Many landless casual labourers lost their jobs, especially in the provinces of North Brabant and Zealand, and moved to Rotterdam. It was not always easy for them to find regular employment at the docks and unemployment loomed for the majority.

As a result, many migrants had difficulty finding regular employment and were dependent on a low income. Estimates of local income per capita show that, although average income rose at the end of the nineteenth century, the people of Rotterdam perhaps benefited less from increasing GNP than those living in the other Randstad cities. Many poor migrants lived in inner-city slums or

[36] R. de Bruin et al. (ed.) *Een paradijs vol weelde. Geschiedenis van de stad Utrecht* (Utrecht 2000) 369.
[37] L. Blok & J.M.M. de Meere, 'Welstand, ongelijkheid in welstand en censuskiesrecht in Nederland omstreeks het midden van de 19e eeuw', *Economisch- en Sociaal-historisch Jaarboek* 41 (1978) 175-294.
[38] H. van Dijk, *Rotterdam 1810-1880. Aspecten van een stedelijke samenleving* (Schiedam 1976); Henk Visscher, *Rotterdammers op de trappen der historie. Een onderzoek naar de sociale mobiliteit van gezinshoofden in Rotterdam rond 1880* (Rotterdam 1997); Van de Laar, *Stad van formaat.*
[39] Richard Lawton and W.R. Lee (eds.), *Population and Society in Western European Port Cities, c. 1650 to 1939* (Liverpool 1998).

in one of the many sub-standard housing blocks in the town districts. The old city centre could not cope with the increasing traffic and population, and frequent radical changes were needed to adapt to the rapid growth. Rotterdam was sometimes regarded as a 'shock city' because of the unlimited construction of monotonous sub-standard buildings housing many poor migrant families. Some observers compared Rotterdam with booming American towns. Migrants had a low social status. Some parts of Rotterdam, in particular in the south where the Rhine-port expansion was concentrated, were stigmatised as 'peasant towns' because many labourers from the agrarian areas of South Holland, North Brabant and Zealand came to live here. The fact that Rotterdam housed many low-status and low-income groups helps to explain why the social pyramid of the city has a broad base.[40]

Conversely, Rotterdam had a small elite and a substantial number migrated to The Hague and Scheveningen. The construction of the first electric railway between Rotterdam and The Hague, which became operational in 1908, stimulated the migration of many harbour barons to wealthier parts of The Hague. This selective migration process also brought about the outflow of cultural capital. Members of the middle classes, who benefited from the growth opportunities of the port, moved to neighbouring areas at the turn of the century. Rotterdam annexed some of these villages in 1941.

We have pointed out, albeit in a rather impressionistic way, that the bipolar social structure of The Hague remained characteristic of the city until the beginning of the nineteenth century.[41] The elite was growing as a result of the immigration of members of the old elites from all over the country, who wanted to escape the modernisation of their hometowns and settle near the royal court where, in their opinion, the old values were upheld. The Hague therefore became a wealthier city, partly because members of the Rotterdam elite settled there, as well as rich entrepreneurs returning from the Dutch East Indies. Moreover, in the first decades of the twentieth century, the middle classes increased rapidly as political bureaucracy grew. A large lower class still remained, however, housed in the industrial quarters in the peat land area of the city.[42]

The middle-class population of Utrecht was also increasing. Between 1860 and 1890, the elite in the inner city declined.[43] At that time, however, exclusive residential areas were built in the east of the city to prevent sub-urbanisation, and labourers moved to the industrial areas in the west of the city.

There is no analysis of the social structure of Amsterdam's population after 1842. We only have information about the higher social circles, namely the people who were allowed to vote in parliamentary elections.[44] De Vries concludes

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[40] Van Dijk, *Rotterdam*, 235.
[41] Stokvis, *Wording*, 215.
[42] H. Schmal, *Den Haag of 's-Gravenhage. De 19e eeuwse gordel* (Utrecht 1995).
[43] C. Denig, *Utrecht van Ancien Régime tot nieuwe tijd. De bewoning van de Utrechtse binnenstad in haar ruimtelijke structuur* (Utrecht 1995).
[44] B. de Vries, *Electoraat en elite. Sociale structuur en sociale mobiliteit in Amsterdam 1850-1895* (Amsterdam 1986).

that, between 1854 and 1884, the base of the social pyramid was extended as large numbers of poor people moved into the city, forced out of the countryside by the agrarian depression. On the other hand, from the 1870s onward, social mobility was high, primarily because of the expansion of new industrial activities such as diamonds and printing.[45] At the end of the period under research, suburbanisation became a real threat to Amsterdam's social elite, which saw its numbers decline. In the twentieth century the exodus of Amsterdam's wealthy citizens continued. According to Wagenaar, there were three reasons for this: they wished to move away from the hectic unhealthy city, the growing opportunities for time management enabled them to work and live in separate places, and the fact that, until 1929, urban income tax rates were much higher than rural rates.[46]

So far, the results of research into the social structure of individual cities in the second half of the nineteenth and the first decades of the twentieth centuries do not indicate the formation of an overall social structure in the Randstad. Only The Hague attracted members of the elites from other Randstad centres. For the most part, these elites left their cities to settle in the surrounding countryside. As we have seen, by doing so they contributed to the urbanisation of the countryside, which would eventually result in the Randstad rim.

The post-war social structure of the Randstad

Table 8.1 shows that fewer people lived in the Randstad cities in 2000 than in 1950. The decrease in population is the result of migration from the cities, which took place between approximately 1965 and 1985. Migration patterns were similar in all the Randstad cities, where emigration exceeded immigration. The emigration surplus slowed after 1975 and stabilised in the 1980s in Amsterdam, Rotterdam and Utrecht and, to a lesser extent, in The Hague. However, drastic changes in the social structure of the cities took place from the 1960s onwards. This is related to the selective migration process mentioned above in the discussion of the economic position of Rotterdam compared to the other Randstad cities.

The social structure of the cities changed because of the differences in the social and demographic status of people moving into and out of the cities. During the 1960s and 1970s, the number of households with children in the Randstad cities decreased. The emigration of families was the direct effect of the spatial development. As incomes rose, those who could afford a family home moved to the suburbs, where homes were being built in large numbers. As a result, homes for people moving out of the big cities had to be built in satellite locations, which were consequently transformed from small villages into cities, such as Zoetermeer near The Hague, Spijkenisse and Capelle aan den IJssel near Rotter-

[45] De Vries, *Electoraat en elite*, 136-137.

[46] M. Wagenaar, 'De trek naar buiten. Suburbanisatie vanuit Amsterdam rond de eeuwwisseling', *Geografisch Tijdschrift*, nieuwe reeks XVI (1982), 342-352.

dam, and Nieuwegein and Houten near Utrecht. In the case of Amsterdam, new cities were designed in the Flevoland polders, especially Almere. The social structure of the Randstad cities came to be dominated by ethnic minorities, young adults, single people, unmarried couples, elderly and one-parent households – a majority belonging to weak socio-economic groups. As referred to above, the selective migration process also had serious consequences for urban employment. This became evident in the early 1980s when the economic depression accelerated the selective migration process.[47]

The first migrant workers who moved to the four major cities came from Spain and Italy, but from the 1960s onwards the number arriving from Morocco and Turkey rose significantly. In the 1970s, 35% of all Turkish and Moroccan labour migrants moved into the four big cities, while they accounted for only 13% of the Dutch population.[48] From the 1970s, international labour migration came to an end because the demand for cheap labour fell drastically due to the economic depression of the 1970s and 1980s. Few migrant workers returned to their homelands, however. While the labour migration figures fell during the 1970s, the influx of migrants from the former Dutch colony of Suriname began to rise. Many Surinamese left their country when it became independent in 1975. The economic depression in the Antilles led to further migration from the West Indies. In the early 1980s, migration from Turkey and Morocco increased again. This migration was not the result of new employment opportunities but new generations joining their families who had settled in the main Randstad cities in the 1960s.

Amsterdam, Rotterdam and The Hague have a relatively large stock of affordable rented dwellings and this supply of cheap housing encouraged families to migrate. Today, most Moroccans and Turks choose a spouse from their home countries. As a consequence, the Randstad cities have become multicultural cities and much of the recent political and social unrest is a result of the problems this creates. The pattern of the cities resembles that of the modern metropolis, where ethnic groups and families choose to settle within their own communities in city neighbourhoods. Although there is no ethnic segregation in the Randstad, certain ethnic groups tend to be concentrated in certain urban zones. For example, Rotterdam houses the largest Cape Verdean community in the Netherlands, and the second largest in Europe after Lisbon. Almost 90% of this minority group lives in one of the former nineteenth-century migrant neighbourhoods in Rotterdam West.

Since the 1980s, the selective migration process has begun to stabilise in most of the Randstad cities.[49] This has to do with the regeneration of the old cities, a process of gentrification that has led to a re-evaluation of older, long-forgotten

[47] R.B. Jobse, H.M. Kruythoff, S. Musterd, *Stadsgewesten in beweging. Migratie naar en uit de vier grote steden* (Den Haag 1990).
[48] Burgers & Musterd, 'Understanding urban inequality', 409.
[49] Musterd & De Pater, *Randstad Holland*.

parts of town where migrant workers settled in the nineteenth century, and where post-war migrant workers came to live. Amsterdam, Utrecht and The Hague have been more successful than Rotterdam in this respect. Rotterdam's Kop van Zuid area, the former docks that are now part of a large-scale waterfront redevelopment scheme, is still under development. However, recent statistical surveys show that many interesting high-income groups between the ages of 45 and 65 leave the city because they are dissatisfied with the social climate, the lack of suitable housing and the lack of green space.[50]

The selective migration process also had serious consequences for the economic prospects of the Randstad cities. During the 1990s the Dutch economy showed remarkable growth rates, but some cities benefited more than others did. As is evident from our earlier discussion on the change in the economic structure of the Randstad, there are remarkable differences between the growth opportunities of, for example, Amsterdam and Utrecht compared with Rotterdam and The Hague. Amsterdam's economy has a more pronounced post-Fordist character, which has meant that unemployment among ethnic minority groups fell more significantly than in Rotterdam during the 1990s.[51] The recent focus on selective migration processes cannot be explained without considering the cultural dimension and the enduring urban competition between the Randstad cities. Culture has been an important aspect of the recent discussions on urban renaissance, in particular since the Randstad cities have discovered the economic potential of culture and urban tourism.

The cultural dimension of the Randstad

Very little research has been carried out into the cultural dimension of the Randstad. We only have observations on individual cities and some comparisons between individual cities. Vijgen and Engelsdorp Gastelaars have made some interesting comparisons between Amsterdam and Rotterdam.[52] They have found that Amsterdam is more urban than Rotterdam, because the demographic structure in Amsterdam has relatively more one-person households and couples without children. Amsterdam also has more timesaving and other leisure facilities that are a prerequisite for an urban lifestyle. Moreover, Amsterdam has many more museums and other cultural institutions than Rotterdam. One would expect smaller supply to be related to smaller demand. Rotterdam's inhabitants, for example, had fewer subscriptions for theatre and museum tickets, but they visit bars and restaurants just as frequently as the inhabitants of Amsterdam do. This, of course, has to do with the difference in social structure between the two cities, as mentioned above.

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[50] M. Bik and A. van Zundert, *Vasthouden en aantrekken* (Rotterdam 1999); R. van Kempen, R. Goetgeluk, H. Floor, *De Randstad uit. Achtergronden bij het verhuizen en willen verhuizen van Randstedelingen* (Utrecht 1995).
[51] Burgers & Musterd, 'Understanding urban Unequality'.
[52] J. Vijgen & R. van Engelsdorp Gastelaars, 'Hoe stedelijk is de Maasstad? Voorzieningen, bewoners en leefpatronen in Rotterdam en Amsterdam', *Geografisch Tijdschrift*, XXIV (1990), 241-251.

In the Netherlands it generally accepted that the cultural elite lives in Amsterdam. Amsterdam has an international reputation as one of the Europe's cultural capitals. Many observers point out that the *Grachtengordel* - the canal belt - is the most innovative area of the Randstad. The *Koninklijke Concertgebouw Orkest* is considered the best orchestra in the Netherlands, the *Rijksmuseum* the finest museum, and the best opera performances are given in Amsterdam's Opera House. In particular, the opera and ballet performances in the Dutch capital attract large audiences from other parts of the Netherlands. But this does not mean that the Arts in Amsterdam completely overshadow Rotterdam and The Hague. On the contrary, the *Mauritshuis* in The Hague houses some of the finest examples of seventeenth-century Dutch painting. The *Gemeentemuseum* has a splendid collection of works by Mondriaan. In Rotterdam, *Museum Boijmans van Beuningen* exhibits many Old Masters, once owned by harbour barons, and also modern design, while the *Centraal Museum* in Utrecht also has an important collection of modern art. A new concert hall was opened in Utrecht in 1979 and, a few years ago, the *Dr Anton Philips Hall* was built in The Hague.

Rotterdam also has a famous concert hall: *De Doelen*, which opened in 1966 and has recently been renovated. The hall was an essential step in Rotterdam's attempts to bridge the cultural gap with the other Randstad cities, in particular Amsterdam and The Hague. From the 1960s onwards, cultural expenditure per capita began to rise in Rotterdam. But when comparing Rotterdam's statistics with those of Amsterdam and The Hague, for example, it must be recognised that part of Rotterdam's budget was spent on sports infrastructure and education, etc. Nevertheless, Rotterdam showed even greater cultural ambitions in the 1980s and 1990s and its cultural image has changed a great deal since then.

Urban rivalry has always been important in this respect, in particular between Amsterdam and Rotterdam. The recent cultural revival of Rotterdam is rooted in a long history of urban rivalry between the two cities. The establishment of the German Opera (1861-1891) in Rotterdam, for example, was the result of the long-standing commercial and cultural jealousy of the Rotterdam elite towards their counterparts in Amsterdam. However, while economic growth and cultural innovation went hand in hand in Amsterdam, the Rotterdam bourgeoisie was too small and lacked the means to uphold civic pride. The Rotterdam elite became less involved in the arts. In the 1870s, the Amsterdam bourgeoisie, by contrast, funded a number of new private initiatives and invested in a sophisticated new cultural infrastructure.[53]

Even today, urban rivalry clouds the discussions on cultural facilities in the Randstad. Rotterdam developed its Museum Park near *Museum Boijmans Van Beuningen* (located there since 1935) in an attempt to embellish the city and boost the cultural sector. The Museum Park houses not only the *Museum Boijmans Van Beuningen* but also the Art Hall, designed by the renowned architect

[53] Jan Bank & Maarten van Buuren (with contribution of Marianne Braun & Douwe Draaisma), *1900: Hoogtij van burgerlijke cultuur* (Den Haag 2000).

Rem Koolhaas, and the new museum building of the National Institute of Architecture. The central government decided to build this museum in Rotterdam as a joint venture between three older Amsterdam-based institutes specialising in housing, architecture and urban planning. This decision, which aroused much protest in the Dutch capital, was made on political rather than cultural grounds. The central government simply wanted to decentralise national cultural institutions. Rotterdam, a city recognised for its modern architecture since the rebuilding following the German bombardments of 1940, naturally welcomed this initiative.[54] The struggle regarding the National Institute of Architecture is not unique. Recently, Amsterdam and Rotterdam were again rivals in the bid to attract the new Institute of Visual Images.

Urban rivalry is not restricted to museums or cultural institutions. In recent years, many efforts have been made in The Hague and Rotterdam to outdo Amsterdam in attracting popular festivals. Amsterdam usually managed to respond to this challenge. However, today The Hague is acknowledged to be the top city for musical performances. This is because an important producer has equipped a theatre in Scheveningen for major musicals. He has recently done the same in Utrecht. Amsterdam has always been a very attractive city for tourists. Other cities in the Randstad are hoping to win a larger share of the fast-growing market for recreation and tourism. However, Rotterdam and Utrecht have less appeal than The Hague. Rotterdam promotes itself as the city of modern architecture, and although city marketeers have been particularly successful in attracting more day-trippers to the port metropolis, Amsterdam and The Hague have gained a large share of the growing market for international tourism. It goes without saying that much of the added value in the service sectors of Amsterdam and The Hague is generated by tourism.

On the cultural level, then, there seems to be more rivalry than complementarity. This is particularly evident in football, the most important sport in the Netherlands. All four large cities in the Randstad have their own team: Ajax (Amsterdam), Feyenoord (Rotterdam), ADO Den Haag, and FC Utrecht. As a Rotterdam inhabitant you can visit the *Concertgebouw* in Amsterdam, but you would not dare to go to an Ajax match unless the team were playing Feyenoord.

Rivalry also seems to be present in education, which could also be considered a part of culture. Amsterdam has had a university since 1876; Utrecht had a university as early as 1636, while Rotterdam did not get one until 1973. The Rotterdam School of Economics, founded in 1913, was then merged with the economics polytechnic from 1939 and the medical polytechnic from 1966. Therefore we may conclude that the base for this university existed even before the Randstad developed. The Hague has no university, but there are two universities within its service area: the University of Leiden (the oldest in the Netherlands), and the Technical University of Delft, which began as a polytechnic in

[54] Irina van Aalst, *Cultuur in de stad. Over de rol van culturele voorzieningen in de ontwikkeling van stadscentra* (Utrecht 1997).

the nineteenth century. The Hague houses the Royal Library, the most important library in the Netherlands, and the National Archives.

We may conclude, then, that in the cultural domain each city aims to realise its own institutions and identity. Amsterdam is at the top, but Rotterdam, The Hague, and to a lesser extent Utrecht, which no longer has an orchestra of its own, are highly successful runners-up. The second-rank cities (Haarlem, Leiden, Delft and Dordrecht) all have important museums too. They also have their own theatres, but the major performances are held in the three largest cities. Leiden and Delft still have their universities, but the polytechnics, which were originally distributed over all the cities, are now concentrated in the four largest cities. Dordrecht, for example, lost all its schools for higher education institutions to Rotterdam. Furthermore, the outstanding football players from the smaller provincial clubs also moved to the big cities.

The cultural domain is thus characterised by four competing capital cities, which all try to offer a full range of facilities for their service area. With the exception of Utrecht, they have all had at some time the ambition to become a cultural capital. This ambition is most evident in Amsterdam, which also tries to cover the widest domain.

Conclusions

We will now attempt to answer the central questions identified at the beginning of this article.

Several long-term historical developments indicate that the urban areas in the western Netherlands have developed into a real metropolis:

1. Complementary economic structures
2. Sub-urbanisation creating uninterrupted urban areas
3. Integrated infrastructures.

However, other long-term developments indicate otherwise:

4. Economic competition resulting in more or less identical economic structures (from industry to economic services)
5. Central government measures to conserve the Green Heart
6. Political disintegration
7. Cultural disintegration.

Before it will be possible to assess the consequences of these processes of convergence and divergence, it would be useful to take into account the unequal development in the Randstad. The causes of unequal development within the Randstad are:

8. The north wing, with Amsterdam and Utrecht as central locations, has a longer tradition in commerce than the south wing that centres on Rotterdam and The Hague. In the post-industrial economy, commerce is again the main growth factor

9. The service area of the north wing includes some wealthy districts (Het Gooi, the Zeist area), which influence demand in a positive way.

The possible consequences of unequal development within the Randstad are:

10. The transformation of a poly nuclear metropolis into two bi-nuclear 'sub-metropolises'
11. The 'surrender' of the Green Heart, resulting in the creation of a Los Angeles-like metropolis without a real centre.

In the meantime, however: The Randstad remains a very individual metropolis consisting of four big cities and at least six smaller ones, which at the moment are each emphasising their specific situation and identity.

9

Groningen: central place and peripheral city.[1]

Introduction

Throughout the ages the economic history of the city of Groningen shows one permanent factor, the functioning of Groningen as a central place for a relatively vast area. At the end of the 19th century, however, there was a turning point when Groningen was firmly connected to the Dutch urban network system. In this chapter the emphasis is placed on that crucial period. The connection broadened the base and scope of the Groningen economy. But in the long run it also contained serious threats. The rather peripheral situation of the city, which had been an advantage in creating strong central functions, now turned into a disadvantage within an integrated Dutch economy characterised, among other things, by concentration of production and migration of firms and people.

The accumulation of central functions

Groningen was mentioned for the first time in a document in 1040. In that year the 'villa Groninga' was donated by the German king to the bishop of Utrecht. But in fact it had already existed for ages then. Recent excavations have revealed, that already long before that date there was a small village at the end of the Hondsrug.[2] The Hondsrug is a ridge of sand in the north-east of the Netherlands which forms the eastern boundary of a sand plateau in the heart of what is now the province of Drenthe. East of the Hondsrug a large peat area was situated, while in the north there were lower areas consisting of different sorts of clay.

Two small rivers, originating in Drenthe, passed the village at some distance, the A in the west and the Hunze in the east. North of the village they joined and together they twisted to the sea. This upper course was called Reitdiep at some time or another.

In spite of the initial distance from waterways, the village was to become the absolute centre of a vast area at the expense of places which were situated on the water. Places like Appingedam, Bedum, Garrelsweer and Winsum in the beginning seemed to have the same opportunities to become important centres. In the middle of the eleventh century, for example, a toll and a mint were founded by the bishop of Bremen in Bedum and Garrelsweer. And mendicant orders es-

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[1] From: Pim Kooij & Piet Pellenbarg (eds.) *Regional Capitals. Past, present,prospects* (Van Gorcum: Assen 1994) 37-63.

2 J. Boersma et.al., Groningen 1040 (Groningen 1990).

tablished themselves in Appingedam and Winsum.

Very soon however Groningen surpassed them all. This was due in the first place to its perfect situation. The villages in the clay area were mainly built on dwelling mounds as a protection against the sea. It took great efforts to enlarge them. For Groningen however there was plenty of room. Moreover Groningen was situated at the boundary of two different areas: the sands of Drenthe where rye was grown and the Groningen clay area which was at that time characterised by cattle breeding. So Groningen was predestined to become a market centre.

This market function was strengthened by the diversion of the A and the Hunze in the middle of the thirteenth century, so that they could function as canals and harbours for the city in *statu nascendi*. At that time the number of navigable waterways in the Groningen area was reduced by the construction of dikes, which had started in the eleventh century. This struck for instance Winsum, which lost its connection with the Reitdiep. Thanks to the embankments the area of arable land was considerably enlarged, which favoured the Groningen market. Still there was much rivalry with Appingedam, 25 kilometers to the northeast, mainly over the butter and cattle trade.

The rivalry between Groningen and Appingedam also had something to do with different rulers. In the eleventh century the eastern part of the later Province of Groningen was given to the bishop of Münster. The bishop of Bremen also had some possessions. But neither of the bishops was able to exert much influence. The bishop of Utrecht in particular tried to exercise his rights. He sent representatives to Groningen which marked the beginning of Groningen as an administrative centre. But the 'prefect', as his main representative was called, was frustrated by leading Groningen families who tried to gain recognition for Groningen as an independent 'Reichsstadt'.

At the end of the Middle Ages, Groningen nearly gained that position, not *de jure*, but *de facto*. The absence of a strong central power enabled the city government, which became more and more professional, to extend its influence outside the city. They did so by playing off the 'jonkers' against each other. Jonkers or 'hoofdelingen' were rich farmers, who tried to exert the same functions as noblemen in other provinces. In the areas east of Groningen, het Gorecht and het Oldambt, the city government succeeded in putting aside the jonkers and gaining complete jurisdiction. In the other regions the position of the jonkers remained relatively unchallenged, but they could not prohibit the establishment of the highest court in the town hall of Groningen.

Even more important was the location of the staple in Groningen, brought about by a law of 1473. All cereals produced in the Groningen areas had to be sold at the market of the city of Groningen. This obligation, later extended to other goods, was to remain in existence until the French occupation in 1795.

Little is known about the foreign trade of Groningen in the Middle Ages.[3]

[3] H.P.H. Jansen, 'Sociaal-economische geschiedenis', in J.W. Formsma, *Historie van Groningen. Stad en land* (Groningen 1976) 123-147.

Groningen coins are found in several places on the Baltic coast. Grain was imported from that area. From Denmark and Northern Germany horses and oxes were imported for the markets in Holland and Flanders. Groningen was also a member of the Hansa League but never played a leading role. The local industry was mainly directed towards the inhabitants of the city – 5000–7000 in 1300 – and of the surrounding areas who frequently visited the city on market days. There are no traces of a putting out system.

There is some evidence that after 1300 the long distance trade became less important. The main aim of the city government at that time was to gain a strong political and economic influence over a vast area. They were very successful. In the second half of the 15th century their influence reached far into Friesland and Drenthe. But this was to come to an end soon.

Consolidation of central functions

Around 1500, Groningen experienced the repercussions of state building, which took place all over Europe. At that time the claims on the sovereignty over the northern parts of the Low Countries passed into the hands of the Habsburgs, who were eager to put them into practice. It was at last Charles V who finally conquered the city of Groningen and the 'Ommelanden' (umland), as the rural parts of the province were called, in 1536. During that turbulent period the leading hoofdelingen in the Ommelanden tried to regain their political independence. They did so, among other things, by relying on other allies than the city had. This went on during the beginning of the Eighty Years War. Between 1580 and 1594 the city was Spanish, while the Ommelanden had joined the Union. But the Ommelanden could not take much advantage of that situation. After the conquest of Groningen in 1594 by the Dutch troops, City and Ommelanden were reunited in one province dominated by the city.

In 1594 the aspirations of Groningen as a city state came to an end for good. But the development of Groningen as the unchallenged centre of a vast service area remained the main concern of the city government. And they proved to be extremely successful. They even succeeded in becoming the owner of large parts of the province, which had formerly belonged to monasteries and Roman Catholic congregations. These areas were mainly situated in the peat and sand areas east of the city. The city did not develop the peat fields. This was left to private companies. But the city controlled the infrastructure and as a result the peat trade. Several canals were constructed for that reason, and also to strengthen the market function of Groningen. Around 1620 central place functions were clearly reflected in the landscape (Figure 9.1).

This kind of activities accelerated during the Twelve-Year Truce in the Dutch war with Spain: 1609–1621. During that period new ramparts were also constructed, which doubled the area of the city and created among other things more room for a cattle market and future economic activities (Figure 9.2).

Figure 9.1 Groningen as a central place in the 17th century

In 1614 a university was founded by the central government. It was meant primarily as a stronghold for orthodox Calvinism, but also accentuated the cultural centre function of Groningen. Moreover, in the first century of its existence, the university became very international. 34 out of the 55 professors appointed in that period came from outside the Republic, among them 25 from Germany.[4] And between 1614 and 1689, 2141 of the 6231 students were of German origins.

Figure 9.2 The extension of Groningen 1609-1621

In spite of this international character of the university, economic relations were limited mainly to the north of the Netherlands and the northwestern parts of Germany. While cities in Holland and other parts of the Netherlands flourished during the 'Golden Age', Groningen concentrated on its service area. From a city government point of view, this was not a bad choice. They got considerable expenditures from what was then called the Peat Colonies, east of the city, from tolls, the leasing of the developed land, and the selling of nightsoil and household refuse to the farmers.

On the other hand, the Province of Groningen was rather thinly populated,

[4] A.Th van Deursen, 'Cultuur in het isolement', in Formsma, *Historie*, 389-425.

as was the adjacent part of Germany. So there was no basis for a substantial growth of the city. Between 1600 and 1800, the population only grew from 19,000 to 23,000. As we have seen, there was plenty of room for them inside the new ramparts. The greater part of the northern extension remained vacant.

There have been some periods in the 17th and 18th centuries, in which the city government, which mainly consisted of merchants, tried to promote export industries. But this did not work out very well. After the revocation of the Edict of Nantes in 1684 by Louis XIV, the Groningen administration offered various privileges to Huguenots in order to make them stay in Groningen.[5] In the Groningen archives 1151 names of Huguenot refugees can be found, among them 819 men.[6] This is a limited number, given a total number of refugees in the Republic of about 75,000. Most of them preferred Holland. The Groningen government supported efforts of some of these refugees to set up a silk industry. But this turned into a fiasco by the lack of raw materials and capital. The only lasting result of the coming of the Huguenots was a small addition to the central service functions of the city by the introduction of the production of wigs and watches, and the phenomenon of coffee houses ('cafés'), which were frequently visited on market days.

In the 18th century, the city government took some measures to promote the wool industry, especially hosiery. Around 1740 they allowed a new organisational structure for that flourishing industry, a mixture of guilds and free enterprise. In 1765 there were 60 firms, mainly situated in the city, which collected by means of the putting out system the products of about 8,000 spinners and knitters all over the province. Hosiery was mainly shipped to Holland. But at the end of the century competition from Westfalen, where wages were also low, became very strong. Moreover, the representatives of the Ommelanden refused to prohibit the export of raw materials, which were scarce at that time, so as not to injure provincial sheep breeders. It was only in the second half of the nineteenth century that this industry was to get a second chance.

The French occupation, 1795-1813, increased the relative isolation of Groningen because it was then cut off from economic relations with northern Germany and the Baltic area; however, we still do not know how important these were. The Groningen autarky just after that period is illustrated by a statistical survey of the Groningen industry, dating from 1816 (Table 9.1). All industries with the exception of gin distilleries, asked for import duties on British and German products. And many branches wanted the restoration of the guild system, which also indicates the weakness of the Groningen industry.

Only industries which were supposed to have supra-local importance were included in this survey. An additional statistical survey, made in 1819, also mentions 106 bakeries (113 labourers), 56 butchers (21), 170 shoemakers (144) and 50 tailors (110), who sold the greater part of their products to the citizens. The

[5] M. Bakker, et.al., *Hugenoten in Groningen. Franse vluchtelingen tussen 1680 en 1720* (Groningen 1985).
[6] Idem, appendix 3.

Table 9.1 The Groningen industry in 1816

kind of firm	number of firms	number of workers	area of distribution
vinegar	2	3	province
chicory	2	12/28	Netherl./N.Germany
beer	7	16	city only
cloth dying	6	30	Netherl./abroad
corn chandling	28	50	province
forging	43	37	province
gold/silversmiths	43	48	province
saw mills	6	15	province
hat makers	5	11	city only
gin	2	10	province
buttons	9	2	city only
candles	16	16	province
glue	2	7	province
vegetable oil	6	18	Netherl./abroad
paper	1	52	Netherl./N.Germany
tiles/bricks	1	30	province/Drenthe sometimes Baltic
pottery	2	6	-
bark mill	1	4	province/N.Germany
shipbuilding	5	25	Netherlands
laundry starch	1	5	province/Overijssel
sugar	1	6/12	province
tinsmiths	4	5	city only
ropeyards	10	50	city only
wool carding	40	80	province
soap	2	4	province
salt	1	6	province

Source: I.J. Brugmans, *Statistieken van de Nederlandse nijverheid uit de eerste helft der 19e eeuw.* (R.G.P., grote serie, 98, 99, 's-Gravenhage 1956).

building sector which operated on a purely local scale, employed about 500 labourers, all working in very small firms. Nine printing firms are also mentioned, with 56 labourers.

A following inquiry, which was held in 1843, does not show many transformations. The number of artisans in all sectors more or less kept up with the population growth. But after the abolition of the staple, more and more breweries were transferred to provincial villages. Only two were left. The large firms of 1816, a paper mill and a brick factory were both closed now. But some new ones had emerged. In 1840 a flax mill was founded where 20 grown-ups and 50

children worked. One printing house had also become relatively large, having 30 labourers. This firm in 1858 was transferred to Arnhem, which is an early example of firm migration. There was also some concentration going on in the production of wool. In 1851, when the first Municipal Survey was published, one factory in this sector already had 60 labourers. Apart from these firms, only a white-lead paint factory had more than ten labourers around 1850. A few owners of windmills had adopted a steam-engine. But in 1853 only five steam-engines out of a national number of 364 were located in the city.

Groningen and the urban network system

While in the first half of the 19th century the economic life in the city remained at the same level, there were important developments in the province, which were to influence the local economy.

In the first place there was an important growth in agricultural output. Since the second half of the 18th century farmers in the clay area specialised more and more in grain growing. Prices rose and there was an intensification of production caused by the population growth.[7] During the French occupation prices rose to a very high level, but after that time they fell because of grain imports from Russia. This affected the purchasing power of both farmers and Groningen shopkeepers adversely. Between 1816 and 1843, for instance, the number of gold and silversmiths in the city fell from 43 to 27.

Around 1840, grain prices started to rise again because of a rise in demand. This was reinforced by the diminishing of competition during the Crimean War. This price rise stimulated the acceptance of technical innovations and a further intensification of production, made possible by a faster rise of the population in the Ommelanden and a lack of opportunities for migration.[8]

As a result the volume of cereals produced in the clay area rose sharply. The staple had indeed been formally abolished at that time, but in practice it still existed, promoted by the course of the waterways towards the city. So the Groningen grain trade got an enormous impetus. This resulted among other things in the construction of many new storehouses along the harbours and the opening, in 1865, of a new Corn Exchange which looked like a miniature Crystal Palace.

In the Peat colonies important transformations also took place. The soil which remained after the digging of peat, proved to be extremely suited for the cultivation of potatoes. This was accelerated by the potato disease of 1846-1848 which pushed up prices. The potatoes in that area were of low quality, but could be used as raw materials for the production of potato gin and potato flour. There was much demand for potato flour in the Dutch, German, and British textile industries, where it was used for starching.

The potato flour industry was dominated by Willem Albert Scholten, who in

[7] J.M.G. van der Poel, 'De landbouw na 1800', in Formsma, *Historie*, 507-531.
[8] R.F.J. Paping, 'De nijverheid op het Groninger platteland 1800-1860', *Economisch- en Sociaal-historisch Jaarboek* 53 (1990), 80-117.

1841, after coming from Gelderland, started production at Foxhol, five miles east of the city of Groningen. He was the founder of the first modern Dutch multinational. Having constructed six mills in the Peat Colonies, he built nine potato flour mills in Brandenburg, Poland, Russia and Austria between 1864 and 1889. In the Peat Colonies he was imitated by local entrepreneurs, most of them living in Veendam.[9]

The potato flour trade was not located in the city. Potato flour was shipped directly to Great Britain, mainly via the Frisian harbour of Harlingen and via Delfzijl. But the tolls had to be paid. Moreover, Scholten built his headquarters in the city of Groningen, as well as two big houses. As we shall see, he and his son got involved in other branches of the agricultural industry later. They were by far the richest people in Groningen and behaved as real city boosters. They founded for example a child hospital, a park, and schools for working class children. They also gave occasional financial support to local industries.

The cereals which were not consumed in the Groningen area were mainly shipped to Rotterdam. This symbolises the connections with the national economy, which Groningen obtained at that time. The foundation of the Kingdom of the Netherlands not only meant political but also economic unification. The central government promoted the construction of interprovincial connections. In 1844, for example, the provincial capitals Groningen and Leeuwarden were connected by a new high road. Around 1830, north-south connections were improved by the construction of a MacAdam road along a canal used for the transport of peat, which had connected Assen, Meppel, and Zwolle to the Zuider Zee since 1780. Between Groningen and Assen there was only this road. It was not until 1861 that the canal was pushed on to Groningen. The Groningen interregional waterways were primarily directed to the North (the Reitdiep), and to the West: (canals partly dating from the 16th century which ran through Friesland to the Zuider Zee).

This network of interprovincial roads and canals resulted in the creation of a national urban network system in the 19th century. Already in the 17th century the basis for this network was laid, when cities in Holland, Zeeland, and Utrecht were interconnected by canals for barges.[10] Via the Zuider Zee and the big rivers cities in peripheral provinces were also linked to this network. But a full integration only took place in the 19th century, when all peripheral capitals, Groningen included, were linked to the network.[11]

A very important role in creating this network was played by the railways. Priority was given to lines which followed the remains of the old network system and to connections with the German Ruhrgebiet. Numerous efforts of indi-

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[9] G. Minderhoud, *Ontwikkeling en beteekenis der landbouwindustie in Groningen* (Groningen 1925). H.J. Keuning, *De Groninger Veenkoloniën. Een sociaal-geografische studie* (Amsterdam 1933, reprinted Groningen 1989).

[10] Jan de Vries, 'Barges and capitalism. Passenger transportation in the Dutch economy, 1632-1839', *AAG-Bijdragen* 21 (1978), 33-399.

[11] P. Kooij, 'Peripheral cities and their regions in the Dutch urban system until 1900', *The Journal of Economic History* XLVIII (1988) 357-371. See also this volume (including map).

vidual persons and companies to link the outer provinces were shipwrecked by a lack of sufficient financial means. Then the central government took the lead. The Railway law of 1860 provided for a railway network which covered the whole country.

Groningen was the last big city to be connected to the railway. It is remarkable that economic organisations within the city in the first place advocated an east-west connection, from Harlingen to the Hannover railway system.[12] By doing so they hoped to gain a prominent position in the trade with Great Britain and Germany. It was indeed the Harlingen-Groningen railway which, in 1866, was first put in operation. In 1868 the German border was reached at Nieuweschans. But the connection with the German railway system had to wait until 1876. The central government gave priority to the north-south connection which was opened in 1870. This turned the 'face' of Groningen to the West for good. For the first time one could reach Amsterdam in one day. And in 1872 it even became possible to return to Groningen the same day, after a three- hour stay at Amsterdam.[13]

In the beginning the railways were mainly used for passenger transport. Goods could be transported more cheaply by ship. The railways however were very effective for the transport of luxury goods such as books. Still more important was the possibility it offered to Groningen salesmen to operate purposefully on the Dutch market. The railway played an important role in intraprovincial passenger transport, but the connection with Holland via Assen experienced the highest growth. This line also was the most important for the import and export of goods. But there were also considerable imports of coal from Germany.

It was mainly the railway which reinforced the position of the city of Groningen as a link between the central place system and the urban network system. So Groningen was a fine example of a regional capital as put forward in the theoretical observations of Hohenberg and Lees.[14] A large majority of the relations between the smaller centres in the Groningen service area and the Dutch urban system were controlled by the city.

Specialisation within the urban network system

This integration of Groningen in the urban network system created opportunities for specialisation. Producers in the city could concentrate on the goods and services which could be produced efficiently in terms of know how, labour costs, and the availability of raw materials. Other goods which Groningen in its 'autarkic' stage had to provide for, now were to a greater extent imported from elsewhere.

Specialisation can be demonstrated by concentration coefficients, the degree

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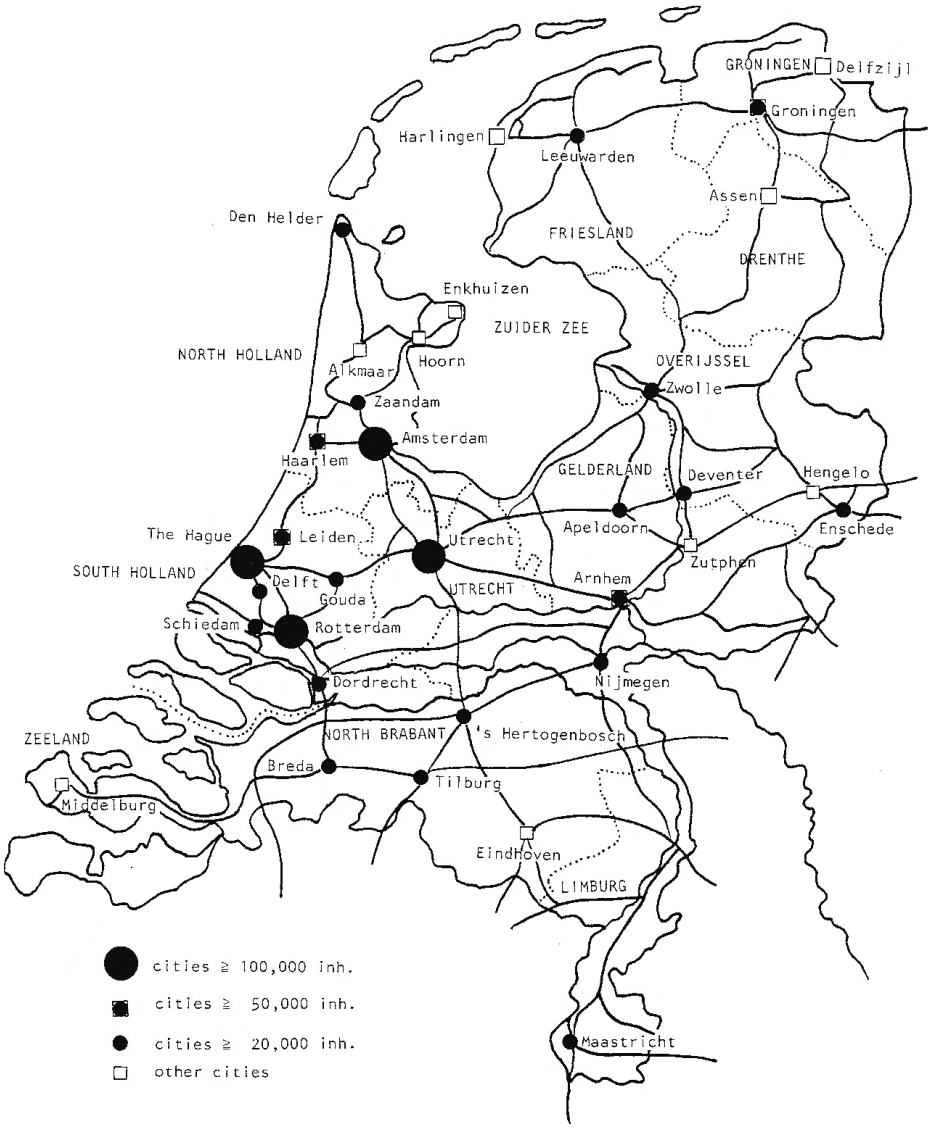
[12] M. Hartgerink-Koomans, 'Handelsbetrekkingen en spoorwegverbindingen in de eerste helft der 19e eeuw', in *Economisch-historisch Jaarboek* 26 (1956) 1-73.

[13] W.J. Roelfsema, 'Groningen en de spoorweg 1866-1916', *Groningsche Volks Almanak* (1916) 1-62.

[14] Paul Hohenberg and Lynn Hollen Lees, *The making of urban Europe, 1000-1950* (Cambridge Mass. 1985) chapter 14.

Figure 9.3 The Dutch railway system around 1900



in which the labour force in a given sector outnumbered the total Dutch labour force in that sector, viewed in the context of the proportion of the Groningen population to the total Dutch population.[15]

[15] A number > 100 indicates an overrepresented sector. See for a full account of the numbers of 1900: Kooij,

Table 9.2 shows the sectors which were overrepresented or underrepresented in Groningen. It also contains a ranking of Groningen among the 21 Dutch cities with more than 20,000 inhabitants. Groningen at that time was the fifth city in the Netherlands. Since some activities like the production of gas and banking were mainly located in large cities, this reduces the high Groningen scores in some sectors. But it also stresses the importance of Groningen as a printing and clothing centre as well as a central place for the professions and as a trade centre. This concentration of notaries and lawyers had to do with the function of Groningen as a strong service centre within its province. But the high score in printing and clothing indicates the specialization in that direction within the Dutch economy.

The central function of Groningen as an administrative centre is somewhat obscured by the presence of large garrisons in other large cities, which pushed up the numbers in the civil service sector.

The printing industry indeed took advantage of the improvement of communications. Some printers/publishers, like the house of Wolters, acquired a greater share of the Dutch market for school books. Even more important was Groningen's leading position in the clothing industry, in which 4.8% of the Dutch workforce had a job.[16] Ready-made clothing was an innovation introduced by Westphalian migrant workers. This sector was indeed dominated by people who had a German background, the production by Jews, the distribution by Catholics. Around 1910 the domestic system was replaced by workshops. The hosiery industry at that time became concentrated in factories, which were large by Groningen standards.

The metal industry in Groningen was rather underdeveloped. In the long run this proved to be a serious disadvantage since it was especially the metal industry which proved to be an important leading sector in the industrialisation wave which started around 1895.[17] Nevertheless, there was one subsector in which Groningen counted on a national scale: bicycles produced by the firm of Fongers were sold all over the country and to the colonies.[18] Thanks to lower labour costs these bicycles were about 15% cheaper than competing brands.

In 1900 the food and allied products sector was the largest industrial sector within the Dutch economy: 9.7% of the labour force. Within this sector there were also some subsectors of importance in Groningen. In the first place the production of tobacco, sometimes connected with the manufacturing of cigars and the roasting of coffee. Here the house of Niemeijer took the lead. Also important was the refining of cane sugar. This took place in a factory which Willem Albert Scholten had established in 1862. Sugar became of still greater importance for

'Peripheral cities', 371, and of 1889 and 1900: Kooij, 'Urbanization, what's in a name? 52-53. Both in this volume.

[16] In printing this percentage was 0.7

[17] J.A. de Jonge, *De industrialisatie in Nederland tussen 1850 en 1914* (Amsterdam 1968, reprinted Nijmegen 1976).

[18] P. Kooij, *Groningen 1870-1914. Sociale verandering en economische ontwikkeling in een regionaal centrum* (Assen/Maastricht 1987).

Table 9.2: Specialisation of Groningen within the Dutch economy 1900

sector	conc.	rank number	cities > 20,000 inhabitants with higher numbers
Free labour	286	3	Zaandam(538), Rotterdam(475)
Printing	285	4	Haarlem(429), Leiden(306),'s-Hertogenbosch(302)
Professions	229	2	Den Haag(240)
Gas, electr.	210	6	Utrecht(362), Leiden(261), Deventer (239), Arnhem(236), Den Haag(235)
Clothing	189	1	
Trade	177	3	Leeuwarden(216)Zaandam(214)
Domestic serv.	158	4	Den Haag(193), Zwolle(175), Arnhem(174)
Banking	156	10	Amsterdam (359), Dordrecht (237), Arnhem (235), Utrecht (242), Den Haag (206), Rotterdam (191, Haarlem (188), Leeuwarden (184), Zwolle (171)
Transport	149	6	Zwolle (241), Dordrecht (220), Rotterdam (202), Utrecht (159), Haarlem (153)
Food and allied prod.	143	8	Schiedam (356), 's-Hertogenbosch (265), Delft (202), Deventer(165), Zaandam (161), Breda (149), Gouda (148)
Chemics	136	14	dominated by Gouda(1342), Schiedam (929), Delft (639). Breda (402)
Wood, cork	129	6	Schiedam (194), Deventer (150), Apeldoorn (139), Zwolle (135), Rotterdam (132)
Civil services	128	11	dominated by Den Helder (925), Breda (358), Den Haag (198)
Building	127	10	Den Haag(187), Nijmegen (168), Haarlem (161), Arnhem (155), Enschede (153), Utrecht (144), Apeldoorn (142), Deventer (140), Dordrecht (134)
Paper	122	12	dominated by Apeldoorn(1204), Maastricht (813), Leeuwarden(658)
Metal, Shipbuilding	91	19	only Schiedam and Apeldoorn scored lower
Leather	89	11	dominated by Tilburg(316), 's-Hertogenbosch (306)
Textiles	33	11	dominated by Enschede(2299), Tilburg(1162), Leiden(538)
Pottery, bricks	16	16	dominated by Maastricht (2159), Gouda (332

Source: *Census 1899*

the Scholten multinational when Jan Evert Scholten started a large beet sugar factory at Hoogkerk, a village five miles west of the city. In 1913 beet farmers, who felt themselves mistreated by this factory, started a cooperative factory in Groningen, with a starting capital of 1.7 million guilders. This turned Groningen into the largest 'sugar town' of the Netherlands.

Cane sugar, tobacco, coffee and tea had of course no links with the Groningen agriculture. Raw materials were imported from Amsterdam, Bremen, and

Hamburg. The Groningen firms, which were rather small, mainly took advantage of the rise in purchasing power on the regional market. Only a few firms like Scholten, Niemeijer, and Tiktak operated on a national level.

This was also the case in some meat works. The canning process was introduced by Germans, e.g. Noack. In this sector as well as in the production of milk, cattle fodder, artificial fertilisers and, later on, the sugar industry, the connection with agriculture was close.[19]

The bulk of agricultural industries, however, originated outside the city, in the Peat Colonies. Around 1870, the potato flour industry was followed by the straw board industry. Most straw board was exported to Great Britain to be used in the packaging of textiles. Scholten also started some straw board factories, but this sector was dominated by local producers at Oude Pekela, near Winschoten, who had imported the process from Northern Germany.

While the Groningen industry was only partly stimulated by agriculture, trade for the greater part depended on it. This is also stressed by the fact that free labourers, of whom there were relatively many in Groningen, almost all had their irregular jobs in the grain trade. The grain trade also partly determined the shape the city developed after the removal of the ramparts, after 1874. In the east of the city a new harbour was excavated, and connected with the other harbours. Along these harbours large storehouses were built. From the new harbour a canal was dug, the Eemskanaal, which reached the sea at Delfzijl, in the east of the province. The Reitdiep was then closed by locks. The local merchants expected this canal to make Groningen a second Hamburg and Delfzijl a second Altona. But this proved too optimistic. In the beginning of the nineties, when the canal was at its busiest, each year about 40,000 m3 of import goods were cleared. This was only 1.37% of total Dutch clearings.[20] Moreover, the greater part of the ships stayed at Delfzijl and did not sail on to Groningen.[21]

In the retail trade dependence on agriculture was very high. Around 1870 an Italian traveler, Edmondo de Amicis, visited Groningen. He was struck by the wealth of the farmers. On market days, he writes, they come to the city in their best suits by coach, barge, or train, spending huge sums in the shops, where they are treated like kings and queens. Afterwards they visit museums and cafés or go for a walk around the city, looking with an air of pity at shopkeepers, employees, professors, officers, civil servants, etc., whom they consider as softies who must work themselves for a living.[22]

The agrarian depression, caused around 1880 by cheap imports of American grain, indeed had a radical influence on the citizens' incomes (Table 9.3). As we can see, the crisis manifested itself in the city with some delay. Thanks to the fall

[19] In 1896 when Scholten founded his beet-sugar factory, there was hardly any production of beets in Groningen. But this changed rapidly.
[20] M. Blauw, M., 'De zeevaart op Groningen en Delfzijl van 1876 tot 1914' (Unpublished undergraduate thesis, Groningen 1983) 76.
[21] In Delfzijl 1.12% was cleared and in Groningen 0.25%.
[22] Edmondo de Amicis, *Nederland en zijne bewoners* (Leiden 1877) 279.

of prices of primary goods, the overall level of real purchasing power remained more or less unchanged, but between 1882 and 1895 there was a considerable rise of bankruptcies among retailers.

Table 9.3: Average annual income of Groningen heads of households

1870	Dfl. 651.00
1880	Dfl. 755.33
1890	Dfl. 819.22
1900	Dfl. 777.16
1910	Dfl. 929.28

Source: Groningen poll tax (see Kooij,*Groningen*, 300).

The trade character of Groningen was also underlined by the absence of large firms. In 1910, there were only three factories with 100 labourers and over: the municipal gas and electricity company (226), the Reinier Muller hosiery factory (191) and the Fongers bicycle factory (165). Only ten firms had between 50 and 100 labourers. In Haarlem, a city with the same size as Groningen, there were already seven companies with 300 labourers and over.

The structure of the Groningen economy also remained mainly traditional. In 1870, 75% of the labour force in industry worked at unmechanised firms with less than 20 labourers. In 1910 this was still the case, in spite of the growth of this industrial sector.

Accordingly, most firms were too small to adopt steam-engines. In 1870 there were only 19 steam-engines in Groningen with a total capacity of 420 HP. In 1910, these figures were 43 and 1317, respectively. This was nothing, 0.3% of the national capacity.[23] For the Groningen firms, gas and electric motors proved to be more useful. Of all large cities Groningen had relatively the largest share of gas engines. In 1900, there were 70 with a capacity of 490 HP. This was a third of the capacity in Amsterdam, which had eight times as much inhabitants.[24] At first they were placed in printing shops and tobacco factories, later also in granaries (elevators), meatworks and textile factories.

After 1902, the number of gas engines dropped because of the opening of an electricity company. The relatively cheap electric motor was an immediate success in the small Groningen firms. In 1910, there were already 427 (1338 HP) at work in bakeries, forges, paint factories, and furniture factories. Printing shops and granaries replaced their gas engines.

Gas (since 1853) and electricity were produced by a municipal company. The Municipal Council refused to give concessions to private firms for enterprises which they expected to be profitable. So the whole economic infrastructure,

[23] J.H. van Stuijvenberg, 'Economische groei in Nederland in de negentiende eeuw. Een terreinverkenning', in *Bedrijf en samenleving* (Alphen a.d. Rijn 1967) 195-227.
[24] P. Kooij, 'De gasvoorziening in Nederland rond 1880', *Gas* 100 (1980) 266-278.

with the initial exception of the water supply, was in municipal hands. It was financed by loans which could be easily redeemed with profits made by the companies.

During the whole of the 19th century, the municipal council was dominated by 19 families. 13 of them were old, distinguished, and partly noble families with occupations in the civil services and the professions. The other families, which for the greater part were Baptists, had a long tradition in the wood and grain trade.[25] Only the Scholten family, which was only reluctantly admitted to these circles, represented industry.

The decision to set up city-owned companies was taken by the two groups together. But their motives were different. The non-trade families, for instance, primarily wanted electricity to light their new houses, which they built along the new broad lanes in the south of the city after the removal of the ramparts. The producers of course mainly had their own firms in mind. But in fact the city government, and most of all the aldermen, considered the city and its firms as undertakings of their own. As we have seen, Groningen had a long tradition in that field. The municipal companies were the biggest in town.

New firms were mainly founded by outsiders. Only 11 out of 28 of the factory owners who were most successful in 1910 were born in the city. 13 originated from the province of Groningen. These industrialists and big traders did not mix with the traditional Groningen elite families. But in politics cooperation was no problem.[26]

It was not easy for foreign entrepreneurs to raise capital. Especially Germans were forced to finance new investments out of profits. As we have seen, the banking sector in Groningen was underdeveloped. It was dominated by noble persons who left the professions. Their first aim was to sell bonds issued by foreign nations and companies to members of their own group. Only in 1908 a bank was founded, again by J.E. Scholten, to provide capital to the middle class.

Migration as a function of specialisation

As Table 9.4 shows, around 1900 the increase of the Groningen population was mainly caused by an excess of births over deaths. But migration was also important. Each year about 10% of the population left the city or settled there. So already in 1890 only 50% of the householders was born in the city of Groningen (Table 9.5). But during the whole period about three quarters of these 'foreigners' originated from the three northern provinces.

The heads of households born outside the North, were characterised by a higher education, e.g. professors and civil servants. But among them were also traders and children of people who in an earlier stage had emigrated from the North. For the greater part they were born in large cities. The immigration from

[25] P. Kooij, 'Fingerprints of an urban elite', in: H. Diederiks, P. Hohenberg, M. Wagenaar (eds.) *The visible hand and the fortune of cities* (Leicester 1992) 102-124. See also this volume.
[26] Kooij, *Groningen*, chapter 2.

Germany decreased because of the political and economic unification after 1870. 50% of the immigrants indeed arrived from the province of Groningen, and 20-25% from the other northern provinces: Drenthe and Friesland. There was much return migration. Of all immigrants 32-38% returned to their province of origin within five years. About 20% left for another place.[27]

Table 9.4: Population growth and migration 1870-1910

	population*	growth percentage	net migration (0/0)	relative mobility (0/00)
1870-79	38,528	19.9	11.5	96.5
1880-89	46,058	21.5	8.0	113.5
1890-99	56,038	18.7	4.5	119.9
1900-10	66,537	12.1	-0.6	113.4

* *situation at the beginning of the dcade*

Source: Municipal records Groningen 1870-1910

Table 9.5: Places of birth of the Groningen heads of households

	1870	1880	1890	1900	1910
City of Groningen	57.1	54.7	50.1	45.2	43.7
Prov. of Groningen	22.4	23.2	27.6	30.1	33.9
Other northern prov.	6.7	10.0	11.7	16.5	13.3
Rest of Netherlands	8.4	8.7	6.0	6.3	6.9
Germany and other foreign countries	5.4	3.3	3.4	1.9	2.1

Source: Sample taken at random from the Groningen register (See Kooij, *Groningen*, 20)

Migration from the surrounding countryside was caused by population growth and mechanisation in agriculture. But also by a pull from the city. Pull factors seem to have been more distinctive. During the agrarian depression there was a fall in the number of migrants.

Since migrants for the greater part were young unmarried people, their occupations only partly reflect the occupational structure of Groningen (Table 9.6). The categories with the highest concentration coefficient did not attract people from all over the country. The intervening opportunities for those occupations were too high. In nearly every large city the same categories were overrepresented. But the larger ones did exercise some pull in the region dominated by Groningen. Servant girls, for instance, mostly came from the smaller towns and from the areas in the neighbourhood. Half of them stayed but many also went back. Only a few of them went further on to the largest cities at the top of the migration hierarchy. The bakers, the largest group among the immigrants in the food sector, for the greater part returned to the province, but not to their places of birth. It seems that they mainly came to the city for the time of their appren-

[27] Kooij, 'Peripheral cities', 369.

ticeship and then settled elsewhere to start a business of their own. The shop assistants, who were also overrepresented, mainly came from small towns. Many of them left Groningen for other large cities.

Table 9.6: The main occupations of Groningen immigrants (%)

	1870/80	1880/90	1890/00	1900/10
Building activities	5.6	4.8	4.3	4.3
Cloth production	2.2	2.2	3.4	2.2
Food and allied prod.	7.8	5.8	11.1	7.2
Trade	8.3	9.1	8.8	5.6
Traffic, transport	5.8	5.8	6.6	7.6
The professions	3.0	1.2	1.2	2.0
Domestic services	20.0	25.2	27.5	24.2
Free labour	7.0	5.4	3.7	4.4
Civil services	5.5	3.9	2.6	3.5
Other occupations	10.6	8.4	9.7	10.4
Without occupation	24.2	28.2	21.1	28.6
n =	892	900	775	889

Source: Samples from the Groningen register (Kooij, *Groningen*, 108)

The locals claimed the best jobs for themselves, for instance in the civil service, but in trade and industry the immigrants increasingly to became a threat to them. Between 1880 and 1900 the number of unemployed Groningen householders increased from 18.5 to 27%. The number of independent local workers also fell, while the number of dependent workers did not rise very much.[28]

The conclusion must be that cheap labour as furnished by the immigrants ousted the locals. This was particularly the case in the service sector in which about 40% of the immigrants found their jobs. Between 1880 and 1890 the number of independent Groningen householders dropped from 81.2 to 70.4. In the following period a part of the now dependent heads of families lost their jobs to immigrants. After 1895, when the agrarian depression was over, this substitution process came to an end. But as migration deficits show, at that time the Groningen inhabitants also discovered opportunities in other areas.

Concentration, branch creation and migration of firms

Between 1900 and 1965 there was hardly any change in the structure of the Groningen economy. An industrial breakthrough failed to come about. In the years between the two world wars, the percentage of industrial workers in the labour force, which had always been below the average of the largest cities, started to fall. This emphasised the commercial character of Groningen (Table 9.7). It also had to do with the fact that the processing of some raw materials,

[28] Kooij, *Groningen,* 297.

such as wood, took place more and more in the area of production. This is why Groningen concentrated on the trade in such products.

Table 9.7: Sectorial division of the Groningen labour force

	1860	1890	1900	1910	1920	1930	1947	1960	1971
Agriculture	2.9	2.5	2.1	2.6	1.6	1.5	3.4	0.9	1.1
Industry	45.1	38.1	40.2	40.2	41.9	41.5	37.9	35.9	31.1
Free labour	3.7	4.9	3.0	2.6	0.5				
Trade,transport	25.7	27.8	32.6	30.6	30.8	32.9	34.3	32.4	29.4
Domestic services	16.8	17.0	16.2	14.0	11.0	10.6			
Other services	9.5	10.9	8.9	9.6	12.1	13.0	24.4	30.8	38.4

Sources: Census.

The 'leading sectors' of 1900 were the same as those around 1960. The clothing industry showed a steady growth. In 1930 about 3200 persons worked in this sector. During the war this sector with its large proportion of Jewish workers and owners was badly hit. But it recovered very quickly after the war and at its peak, in 1964, 4200 people were employed. Most workers in this sector were young unmarried women, so the decrease in jobs in domestic services was compensated. The women even preferred the clothing sector with its higher wages with the result that during the twenties and thirties a considerable number of German maids had to be hired.[29]

In the food and allied products sector tobacco, sugar, coffee, and tea remained the leading products. In 1930 the concentration coefficient for tobacco was a very high 1192. Some gin and lemonade factories, originating from the old liqueur distilleries also gained some importance as well as some producers of instant pudding.

Metal remained weak. The manufacturing of bicycles remained the only substantial activity. Shipbuilding also showed some growth. In 1930, this sector employed 353 people. But the depression did much damage. After the second world war it recovered, supported by the rapidly growing demand for a special medium-sized ship, the coaster, which was a Groningen invention. But for the greater part these coasters were built in other provincial towns, mainly Hoogezand.

The average size of firms remained quite small. In 1930, the important firms - according to the census - had an average workforce of 22. This was the lowest of all large cities of which 14 (out of 18) had an average of 50 and over and eight exceeded 100.[30] In most sectors, especially paper and metal, the level of mechanisation was far below the national average. Only in the food sector and in print-

[29] Erna Oosterveen, 'Duitse dienstbodes in Groningen' (Unpublished undergraduate thesis, Groningen 1990).
[30] Hille de Vries, 'Ongelijke werkloosheid. Nederland 1920-1940', in P.W.Klein, G.J.Borger (eds.) *De jaren dertig. Aspecten van crisis en werkloosheid* (Amsterdam 1979) 117-130.

ing the reverse was the case.[3132] The electric motor remained the main source of energy.

In 1930, there were seven firms in Groningen with 200 employees and over. These firms had already been the greatest in 1900, the clothing factories being the fastest growers. In 1939, three clothing and hosiery factories had 400 employees and over: Levie, Reinier Muller, and Grol. There were even fewer firms with 100-200 employees, only three in 1939. Almost all firms were located in the inner city, especially in those parts of it that were added to the city area at the beginning of the 17th century. Only a few large factories had moved to the southern parts of the city near the railway station. And there was a concentration in the village of Helpman which was taken over from Haren in 1915.

After the war, an industrial estate was created south of the inner city. Factories and institutions were growing faster at that time. But still the Groningen firms, compared to those in other large cities, had the lowest average size. According to the census of 1963, Groningen had 78 companies, factories, and institutions with 100 employees and over. The average number of employees was 230. Utrecht and Haarlem at that time had 532 and 283, respectively. And the Groningen clothing industry was at its zenith.

As we have seen, the formation of the urban network system enabled a specialisation in production. Thus industries could be concentrated on specific places with special opportunities for settlement. In the long run, especially after 1960, this would ruin the traditional Groningen industry. But in the meantime Groningen was rather successful in penetrating the Dutch and international markets for ready-made clothing. This was accompanied by a concentration of production caused by the merging of several Groningen firms and the transfer of some provincial firms to Groningen. But in other sectors production was concentrated elsewhere. In 1907 the production of vegetable oil and fodder for example was for the greater part concentrated in the adjacent village of Hoogkerk. The concentration in the dairy industry, which was not represented very strongly in the city, was led by the DOMO firm, founded in 1938 in the province of Drenthe.

But what was worse was that Groningen experienced the incorporation of Groningen firms in large corporations which had their headquarters elsewhere. This development started very slowly but accelerated in the sixties and mainly affected successful, sometimes innovative industries which could have broadened the rather small, labour-intensive base of the Groningen industry.

This development started in the food and allied products industries. In 1913 for instance, Van den Bergh, which was at that time competing with Jurgens to control the Dutch and British margarine markets, took over the Groningen mar-

[31] Bert Schuitema, 'Groningen als industriestad beschouwd. Enkele aspecten van de industriële ontwikkeling van de stad Groningen in het interbellum' (Unpublished undergraduate thesis, Groningen 1983) 39.

garine mill, which employed about 50 people. Production was concentrated in Oss in Brabant and the Groningen branch was closed. In 1919, a concentration in the Dutch sugar industry caused the closing of the Scholten refinery. The production of syrup continued.

In addition to this process of branch creation the problem of the migration of firms manifested itself. This was caused by the existence elsewhere, mainly in the West of the Netherlands, of economies of scale and agglomeration opportunities which Groningen could not offer. The production of canned meat for the greater part disappeared from the city. And in 1945 a large tobacco factory, which was destroyed by the war, was transferred to Gelderland. A serious loss was the migration to Holland of the largest of the ten paint factories, Sikkens, at the end of the thirties. This frustrated promising developments in the chemical sector. Between 1955 and 1960 seven firms with more than 10 employees left Groningen, the highest number among cities of comparable rank.[33]

Around 1965 it became obvious that the economic base of Groningen, compared to other large cities, had been too weak to transfer most local industrial initiatives into leading sectors pushed by the advantages of an economy of scale. The peripheral situation of Groningen prevented the growth or location of industries which were in need of many semi manufactured products or close connections with the large ports.[34] The regional backward and forward linkages of the clothing industry were very limited. Textiles were ordered from Twente and machines from abroad, while the regional retail market did not show much growth. At most there was some demand for potato flour and straw board produced in the Peat Colonies.

Thus Groningen, with its slackening industrial growth, more and more reverted to its 19th century position of a service centre. In trade there were some successful efforts to broaden the scope of some Groningen firms by setting up branches in other cities, but paradoxically the Groningen headquarters were surpassed in most cases by branches in the large cities in the West. This happened for instance with the firm of Catz, a producer of liqueur and retailer of exotic fruits. Originated in Oude Pekela in the Peat Colonies, the firm transferred its activities to Groningen and in 1878 a branch was opened in Rotterdam. Afterwards branches were established in Antwerpen, Amsterdam, the U.S.A., and Batavia, and in the end the Groningen branch was closed. In the retailing of clothing comparable developments took place. Many merchants in ready-made clothing, who had migrated from Germany, opened a shop in Groningen and then moved to Amsterdam. The founders of two of the largest chain stores based on textiles, Gerzon and Vroom, were born in Groningen and Veendam. They did not even try to start in Groningen, and around 1880 opened their first shops in Amsterdam. Groningen even had to wait until 1958 before a branch of

[33] P.H. Pellenbarg, *Bedrijfsmigratie in Nederland* (Groningen 1976).
[34] R.Tamsma, *Het noorden des lands. Drieëenheid, drievuldigheid, driestemmigheid* (Groningen 1984).

Vroom and Dreesmann was opened.[35] At that time the location of branches in Groningen by stores from large cities in the West accelerated. But this did not affect employment in the way industrial chain formation did.

So at the end of the fifties much of what had been built up during a century was disappearing. Even the position of Groningen as a regional service centre was challenged, as we will see now.

The rise of provincial service centres

The industrialisation in the Peat Colonies, as already mentioned, accelerated after the agrarian depression stimulated by the creation of cooperative firms.[36] As a result some communities in the Old Peat Colonies - the western part of these Colonies, where peat digging had ended before the beginning of the 19th century - succeeded in sustaining the growth which was mainly caused by migration during that period. Some of these communities - Winschoten, Veendam, Sappemeer - up to 1900 even turned into multifunctional centres, into small towns. They acquired their own service areas and their own connections with the urban network system. This is for instance shown by the flows of goods - strawboard and potato flour - which for the greater part did not pass through the Groningen 'staple'. And after 1900, shop-assistants, maid servants, (unemployed) labourers, and others increasingly migrated to the large cities in the West without using the city of Groningen as a gateway.[37]

In 1900, there were five towns in the province of Groningen: Groningen; its old rival Appingedam, which now had to cope with the adjacent emerging harbour town Delfzijl for central functions; Winschoten, situated at the border of the Peat Colonies and serving as a centre for the northeastern part of this area as well as the rich farming area Oldambt; Nieuweschans, founded as a fortified town, which remained very small; and Sappemeer, the first centre in the Peat Colonies to obtain the status of town with less than 20% of the labour force in agriculture.[38]

In 1930, Sappemeer was joined by four other centres in that area which also had become towns: Veendam, Hoogezand, Oude Pekela, and Wildervank. In 1949, Hoogezand and Sappemeer merged, while at the end of the sixties the new town of Stadskanaal situated on the border between the communities of Wildervank and Onstwedde in the heart of the New Peat Colonies - which were cultivated in the nineteenth and the beginning of the 20th century - became a community of its own.[39] Table 9.8 shows the population growth of these

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[35] Gerzon established his first branch in Groningen, in 1896. But Vroom and his partner, the German immigrant Dreesmann, also took into consideration that a member of the Vroom family already had a shop in Groningen.

[36] G. Minderhoud, *Ontwikkeling en beteekenis der landbouwindustie in Groningen* (Groningen 1925).

[37] Kooij, P., 'De eerste industrialisatie- en urbanisatiefase in de Groninger Veenkoloniën', in *Van het verleden naar de toekomst* (Groningen 1990) 109-134.

[38] This is the definition of town as formulated by the Dutch Central Bureau of Statistics. See: *Typologie van de Nederlandse gemeenten naar urbanisatiegraad* (Den Haag 1958).

[39] Stadskanaal was composed by the former community of Onstwedde and a part of the community of Wilder-

towns. Until 1900, the concentration coefficients of Appingedam and Winschoten in trade and traffic were comparable to those of Groningen. They served as centre towns for a growing hinterland.[40] But in some industrial sectors there was a better representation than in Groningen: in Winschoten brick production, wood, metal and strawboard, in Appingedam mainly strawboard. The other towns in the Peat Colonies on the whole became industrial centres. But Veendam, the centre of potato flour production but also an old shipping centre, increasingly developed central functions of its own as did Hoogezand-Sappemeer and Stadskanaal at a later stage.

Table 9.8: Population growth of the Groningen towns

	1815	1870	1930	1971
Groningen	27824	38528	105005	169385
Hoogkerk	(612)	(1398)	4133	
Appingedam	2664	3612	6487	11475
Nieuweschans	692	1091	1997	1805
Winschoten	2678	5631	13343	17785
Sappemeer	(2375)	(4048)	6503	30675
Hoogezand	(3379)	(7280)	11431	
Veendam	(6338)	(9590)	13348	24005
Wildervank	(2859)	(7468)	10058	
Onstwedde/Stadskanaal	(928)	(5914)	(18110)	33120
Oude Pekela	(3386)	(4600)	7556	8030
Nieuwe Pekela	(3546)	(5061)	(5472)	5100
Delfzijl	(3103)	(5266)	(9872)	22165
Haren	(1793)	(3171)	(7072)	17410

Source: J.C. Ramaer, *Geschiedkundige atlas van Nederland. Het Koninkrijk der Nederlanden (1815-1931)* ('s Gravenhage 1931); *Census 1971*. Between brackets the number of inhabitants in the pre-urban status.

Thus it was in the east of the province of Groningen, which was relatively the most densely populated area, that the service functions of the city of Groningen were limited. Already in the 19th century four secondary schools were founded in this area, even a Gymnasium in Winschoten.[41] In the west and north of the province, which with the exception of some brick and dairy factories remained agricultural, the influence of the city remained much stronger.[42] No towns with a hinterland of their own emerged there. The status of town was only achieved by the industrialising village of Hoogkerk which was incorporated

vank. The remaining part of Wildervank was added to Veendam.

[40] Kooij, 'Eerste urbanisatiefase'.

[41] Outside the towns in the east, only the village of Warffum got a H.B.S. (secondary school) to serve the northern parts of the province, which were rather remote from Groningen.

[42] H.J. Keuning, 'Proeve van een hiërarchie van de Nederlandse steden', *Tijdschrift voor economische en sociale geografie* (1948) 566-582.

in the city in 1968 and by the southern neighbour of Groningen, Haren, which was a product of suburbanisation. There was much migration from Groningen in a southern direction. This accounted for most of the growth of the communities in the northern parts of Drenthe. In 1971, 23% of the Groningen labour force lived outside the city, mainly in that area.[43] After 1960, however, fast growing service centres such as Assen in Drenthe and Drachten in Friesland however, began to make inroads into the southern and western boundaries of the Groningen service area.

In the thirties, the limitation of the Groningen influence in the east of the province was reinforced by the rise of passenger and goods transportation by road at the cost of shipping. In the Peat Colonies several transport companies were founded which to some extent made use of secondary roads not leading to Groningen but interconnecting the eastern centres.

Still, these developments did not really challenge the unique top position of Groningen. But they hampered the growth of the city. In 1900, 75.4% of the urban population in the Province of Groningen lived in the city of Groningen. In 1930 this percentage had fallen to 59.8%, and in 1971 it was 53.1%. A more radical change was prevented by conditions which affected the provincial towns as well as the city of Groningen.

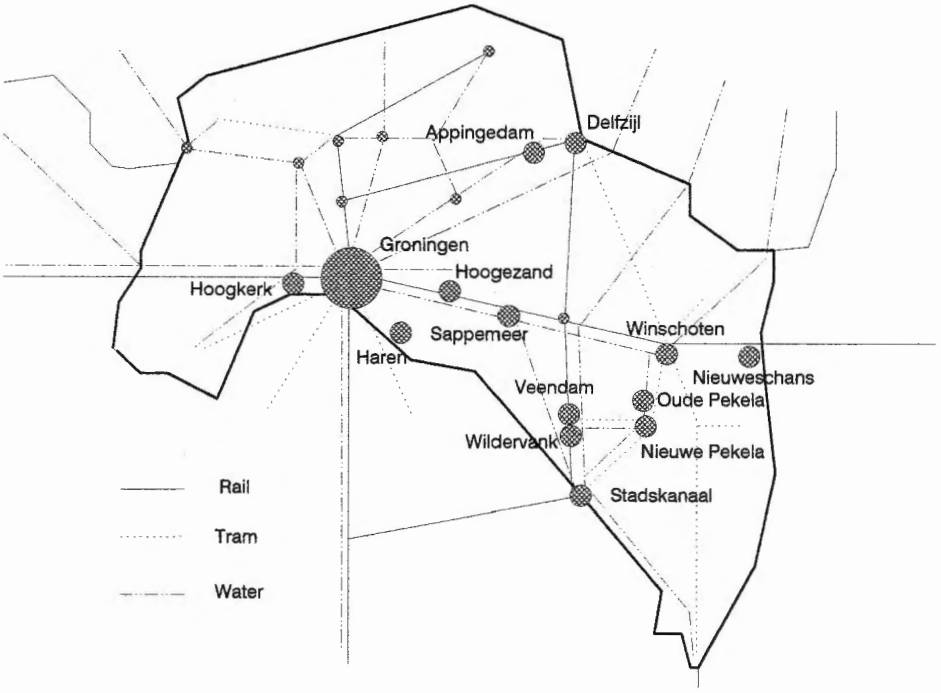
In the first place there was the growing mechanisation of agriculture, which had already started in the 19th century. The lack of sufficient additional job opportunities resulted in a almost permanent migration deficit of the province as a whole from 1830 onward.[44] The spreading of industrial sites over too many centres prevented the development of economies of scale. In the provincial towns migration of firms also took place repeatedly. Two striking examples are the steel works of De Muinck Keizer and the tyre works of Wilhelmi at Hoogezand. They left around 1914 and continued to flourish as DEMKA in Utrecht and Hevea in Arnhem.

Moreover a decrease in demand since the middle of the sixties accelerated the concentration in the provincial potato flour industry, out of which the AVEBE emerged as a sole producer. AVEBE even took over most activities of the Scholten corporation which had fallen into bankruptcy. The straw board industry switched from straw to waste paper as a raw material, and since the seventies the mills have been taken over by corporations outside the North. These developments affected employment in a serious way.

But there was some compensation. In 1952, the Dutch government initiated an active regional industrial policy to decrease the labour shortage in the West and to promote industrial activities in some 'problem areas', of which Groningen was one. Investment premiums and the stabilisation of wages on a low level were the main instruments. Besides, in 1959 natural gas was discovered in Groningen. Firms located in Groningen got a slight reduction of 5% on the price of natural

[43] Census 1971. 14% worked outside the city. In 1947 these percentages were 8.8 and 7.8 respectively.
[44] H. ter Heide, *Binnenlandse migratie in Nederland* ('s-Gravenhage 1965).

Figure 9.4 New towns in the province of Groningen



gas, while some large users got special conditions. Near Delfzijl also salt was discovered.

Of these factors mainly cheap labour caused the location of several branches of multinationals during the boom period of the sixties.[45] For instance Philips in Stadskanaal (2600 employees in 1970), Soda works (later to become AKZO) in Delfzijl (1200), where also aluminum and cable works were located (each about 600 employees) and Silenka (550) in Hoogezand. Between 1960 and 1971, 4900 jobs disappeared but 5300 new ones were created.[46] Even the Groningen clothing industry, since 1955, established a number of branches in provincial communities.

These new jobs, however, were totally insufficient to turn the Groningen migration balance into a positive one. This was also caused by the fact that agriculture which became more and more directed from Brussels, slowly fell into a depression. And when in the seventies business cycles turned, it was the newly founded branches of large firms which were first threatened. But in the meantime they had broadened the economic base of a number of provincial towns at the expense of the city of Groningen.

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[45] Tamsma, *Noorden*, chapter 2.
[46] J.J. van der Werf, *Industrie en regio* (Groningen 1989).

The last twenty years

Around 1965 the vulnerability of the economic structure of the city of Groningen became very clear. Groningen got its share of the big falling-off in textiles and metal which started at that time.[47] The problems in the clothing industry started with the abolition of the import duties between the EC countries, which were 24% at that time. For the time being the larger firms could prolongue their existence by concentrating on high quality-clothing. But by 1984 it was all over.

Meanwhile concentration and branch formation in other sectors went on. The production of the Scholten syrup works was transferred to Amsterdam. In 1971, the production of bicycles in the North of the Netherlands was concentrated in Heerenveen in Friesland. And at that time the large tobacco factory of Niemeyer had become a branch of an English firm; it remained however one of the largest tobacco producers of the Netherlands (850 employees). Most coffee producers closed shop as did producers of lemonade and instant pudding. So the variety in industry was reduced once again. In the eighties the last large old independent firm of Groningen origin, the printing and editing house of Wolters-Noordhoff also became a branch of a corporation having its headquarters outside Groningen.

In Groningen also the regional policy of the central government offered some compensation. A branch of the Philips company was established in 1960, having about 800 employees ten years later. But in general large firms preferred locations in other provincial towns where wages were lower and the supply of unskilled labour was more abundant.

As a result of the decline in industry, the service sector became still more important (Table 9.7). The discovery of gas resulted in the founding of the headquarters of a sales organisation, the Gasunie in Groningen in 1963, which was repeatedly expanded.[48] But the fastest grower was the university. A century before, nothing was left of the 16th century glory of this institution. In 1876, when there were only 142 students, the university was almost closed. But after the second world war a big boom began. In 1960 there were about 5000 students and in 1970 about 11,500. At that time this institution produced 2.5% of the total provincial income.[49]

The necessity for economic reorientation as well as the competition of provincial towns had an impact on Groningen policy. The Groningen municipal council no longer confined itself to infrastructure and public utilities, as it had done since the 19th century. During that time it was their own corporation, 'the city of Groningen' which was considered as most important. As late as the thirties there were, for instance, considerable revenues from the tolls in the Peat Colonies which, however, frustrated the development of efficient transport. Moreover, there have been two periods in which the Groningen administrators

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[47] Tamsma, *Noorden*, 56-77.

[48] The Gasunie is a joint venture of Shell, Esso, Dutch State Mines, and the Dutch Government.

[49] F.J. de Jong, *De economische betekenis van de rijksuniversiteit te Groningen voor de provincie* (Haarlem 1969).

showed themselves slightly hostile towards industry and some services. This was the case in the period between the wars when socialist aldermen had just taken over the administration. Housing then got absolute priority over industrial estates. The second period was the seventies, when the reconstruction euphoria was over and environmental issues became prominent. In the eighties, however, the Groningen government began efforts to promote employment. The next chapter on Groningen will present an analysis of the problems the administration especially had to cope with, and the views and solutions which were put forth.[50]

[50] Piet. H. Pellenbarg, 'Groningen: regional capital of the Northern Netherlands, seeking a new identity', in: Pim Kooij and Piet Pellenbarg (eds.) *Regional Capitals. Past, Present, Prospects* (Assen 1994) 63-85.

10

Fingerprints of an urban elite: the case of a Dutch city in the nineteenth century.[1]

The aim of this chapter is to evaluate the occupations of the Municipal Council in a Dutch city during the nineteenth century. This city is Groningen in the north, which was at that time the fifth city of the Netherlands. Groningen was rather peripherally situated. It should therefore be easier to make a distinction between influences from within and those from outside the city.

The questions posed are (1) Which groups were particularly represented in the urban government? (2) To what extent were these groups able to serve their own interests and to have their mark on the city?

In this respect one has to take into account that during the nineteenth century many major tasks were taken over or initiated by the central government. This reduced the possibilities of the leading groups in the cities. So we have to see which matters they managed to keep in their own hands, by tracing the fingerprints they have left in the archives and on the urban environment.

The urban electoral system

During the first half of the nineteenth century the Dutch electoral system was very complicated.[2] According to the constitution of the newly formed Kingdom of the Netherlands (1815), the members of the Second Chamber of the states general were elected by the members of the provincial states. The Second Chamber was the main representative body, though it was in a way controlled by the First Chamber, which consisted of noblemen, appointed by the king. The provincial states in their turn contained the representatives of three orders: the nobility, the towns and the countryside. The number of representatives differed per order per province.

The Netherlands - excluding the future Belgium - comprised eighty-two, later eighty-seven, cities. This distinction was not based on formal criteria. Size, historical development and central functions were the main factors. According to regulations outlined by the central government, cities were to be governed by a municipal council headed four mayors. In 1824 some revisions were made. The number of mayors was reduced to one, henceforward assisted by aldermen.

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[1] From: Herman Diederiks, Paul Hohenberg and Michael Wagenaar (eds.) *Economic policy in Europe since the late Middle Ages. The visible hand and the fortune of* cities (Leicester University Press: Leicester 1992) 102-124. I wish to thank Daan van der Haer, Anneke ten Koppel, Harmina Tasma and Rolf van der Woude for their assistance.

[2] L. Blok, *Stemmen en kiezen. Het kiesstelsel in Nederland in de periode 1814-1850* (Groningen 1987).

The right to elect or to be elected was the privilege of only part of the population: men above a given age, mostly 23, who met certain financial qualifications. One had to pay a certain amount of direct taxes, the 'census'. The taxes specified by regulations of 1816 and 1824, were those on land and wealth. The latter was mainly based on the value of one's residence and its contents.[3] The third existing direct tax, the patent tax, which was to be paid by most people who had their own business, was excluded from the calculations.

It is obvious that the electoral system favoured people who acquired their incomes from rent, including the old urban elites with their traditional display of wealth. The main aim of the census indeed was to restrict electoral power to people who could 'bear the responsibilities'. This was also effectuated by a system of indirect elections. In the towns and in the country election councils were created to elect the members of the municipal councils. The census required to be eligible in these councils was higher. In Groningen, for instance, in 1824 one had to pay 30 guilders in direct taxes to be entitled to a vote, and 50 guilders to be elected. Only people from the latter category could become a member of the Municipal Council. As Table 10.1 shows, only a small section of the population met those qualifications.

Table 10.1 Voters and eligible men in the city of Groningen

	1816	1830	1852	1870	1890	1910
Number of inhabitants	27,824	30,260	31,577	38,528	56,038	74,613
Number of men qualified to vote		1,089	1,734	1,925	2,917	9,093
As a percentage of the population		3.6	5.5	5.0	5.2	12.2
Number of members Municipal Council	17	16	21	35	30	33
Census voter threshold (guilders)	20	30	25	25	10	10
Census threshold for eligible persons	35	50				

Sources: L. Blok, *Stemmen en kiezen. Het kiesstelsel in Nederland in de periode 1814-1850* (Groningen 1987) 299; provincial almanacs; Archives of the Municipality (275); Census.

The members of the municipal council were chosen for life, those of the election councils for nine years[4]. The representatives of the city in the provincial states were appointed by the municipal council.

The revision of the constitution in 1848 brought major changes. The system of indirect elections was abolished.[5] The election councils disappeared, but the

[3] L. Blok and J.M.M. de Meere (1978), 'Welstand, ongelijkheid in welstand en, censuskiesrecht in Nederland omstreeks het midden van de 19e eeuw'. *Economisch- en Sociaalhistorisch Jaarboek* 41 (1978) 175-92; Joh de Vries, 'Het censuskiesrecht en de welvaart in Nederland', *Economisch- en Sociaalhistorisch Jaarboek* 34 (1971) 178-232; Boudien de Vries, *Electoraat en elite. Sociale structuur en sociale mobiliteit in Amsterdam 1850-1895* (Amsterdam 1986) 21.

[4] Before 1824 the term was three years. Since that year every three years a third had to step down, but could stand again.

census remained as well as its regional and local variations. An important alteration was the inclusion of the patent tax which augmented the opportunities for businessmen. The census for the Second Chamber was fixed twice as high as the census for the municipal council. There was no extra threshold for candidacy. The urban government was specifically regulated by the Local Government Act of 1851, abolishing the political distinction between town and country. A term of five years was introduced for the members of the municipal council and re-election was possible.

After 1848 the election system remained unchanged for the rest of the nineteenth century. In 1887, however, the census was lowered and it became possible to admit people with a certain status and abilities to the elections, for instance from the field of education. This was extended in 1896. All these reforms led to a rise in the number of electors. Let us see now what this meant for representation on the local level.

Representatives and representation

Table 10.1 gives some evidence on Groningen voters and eligible candidates. Unfortunately, in the first half of the nineteenth century the registration of electors was not very accurate. We have only some totals, but a number of lists still exist with the names of the men who qualified for the election council. These lists contain the names of about two-thirds of the potential voters. From 1852 there are complete lists of electors for every year.

Since, after the proclamation of the regulations in 1816 and 1824, the members of the municipal councils were appointed by the king, the elections gained importance only during the 1830s. Table 10.2 gives a classification of the occupations of the potential members of the election council in 1830. A comparison with other large cities is impossible, because of the lack of data.[6] However, since we have reconstructed the occupational structure of Groningen in 1830, it is possible to give some evaluations.

As Table 10.3 shows, there was a strong overrepresentation of the services and the Civil Service among the potential members of the election council and underrepresentation of industry. This is because Groningen had a long tradition as a regional political and service centre.[7] Many Civil Servants derived their wealth from the land, while in services many fortunes had been made, often displayed in expensive houses.

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[5] There was one exception: the First Chamber of the states general was elected by the members of the provincial states.

[6] Some data are available for Utrecht (1830), Haarlem (1842) and Delft (1842) but these concern all electors while the classification used is uncomparable. L. Blok, 'Van eene wettelijke fictie tot eene waarheid. Beschouwingen over kiesstelsel en kiesrecht in Nederland in de eerste helft van de negentiende eeuw', *Tijdschrift voor geschiedenis*, 92 (1979) 391-413, 401. Blok, *Stemmen en kiezen*. 302.

[7] Pim Kooij, 'Peripheral cities and their regions in the Dutch urban system until 1900', *The journal of Economic History* 48 (1988) 357-71, 361. See also this volume.

Table 10.2 Occupations of potential members of the election council in 1830 (%).

*Agriculture (*1.3*)*	
farmers	1.3
Industry (24.7)	
owners of factories *fabrikeurs*	1.3
pharmacists	2.5
artisans:	
building (carpenters, painters ...)	2.5
food (bakers, butchers . . .)	5.1
gold and silversmiths	2.8
metal, wood, leather (smiths, shoemakers, joiners)	5.4
textiles (dyers, tailors, weavers ...)	2.6
others (printers, manufacturers of soap, glue, oil)	2.6
Services (44.8)	
merchants (no specification given)	25.7
wholesale merchants (wood, textiles, iron, stone)	2.5
booksellers, winesellers	2.1
other shopkeepers	1.8
shopservants, valets	1.1
bookkeepers, clerks	0.8
traffic (boatmen, wagoners)	1.8
hotel and catering industry	4.2
the professions (doctors, notaries, lawyers)	5.0
Civil Services (14.2)	
top civil servants	7.4
civil servants (teachers, corn-measurers ...)	2.9
military officers	1.1
professors	2.8
Religious Services (2.6)	
clergymen, priests ...	2.6
Others	
without occupation (including students)	9.3
unknown	3.1

(N=612)

Sources: Municipal Archives (275/8-880), the Groningen register.

In 1830 most of the industrial sector consisted of very small-scale firms and was mainly focused on the local market. Most bakers, butchers, carpenters, tailors, coachbuilders, etc. occupied small houses and therefore paid a low property tax. Even when their business flourished, they ploughed their profits back into the business instead of living in lavish style. The traditional producers of glue, soap, ropes, oil, textiles, and so forth, had a larger service area and do figure on the list, as well as the chemists and most of the gold and silversmiths, who had the farmers in the countryside as their customers.

It is probable that a number of craftsmen had voting power but were not eligible. More artisans, however, had to wait until 1851. Even then it was the service sector which profited most. The lowering of the census and the inclusion of the patent tax resulted in an increase in the number of electors of the Municipal Council from 1,007 in 1850 to 1,734 in 1852. Of this total, 312 people passed the census threshold owing to the inclusion of the patent tax. Among them were fifty-one boatmen, who were not assessed for other direct taxes.[8]

At the municipal level, exclusivity in voting disappeared after 1851. In fact, only the lowest class, consisting of labourers and small artisans, were excluded. This is shown in Table 10.4 in which an income stratification of the Groningen heads of households, based on a local poll-tax, is compared with the percentage of electors among men of 23 years and over.

Even between 1824 and 1852, when the census was at its highest level, some members of the lower middle class had the right to vote (see also the occupations

Table 10.3 Electors and the occupational structure in 1830

	Potential members election council	Head of households
Agriculture	1.3	2.9
Industry	24.7	36.1
Services	44.8	25.4
Civil Service	14.2	4.1
Religious services	2.6	0.3
Free labour	-	6.1
Without and unknown	12.4	25.0

Sources: Table 9.2. Sample from the Groningen register of population 1830 (n=653)

mentioned in Table 10.2). In 1852 the number of voters already exceeded the number of heads of households in the income groups 1-4. Besides, about 17-20 per cent of the heads of households were women, mostly widows who had a low income, and 1-2 per cent of the heads of households were under 23. The percentage of the heads of households entitled to vote did not change very much in 1887. It was the revision of 1896 which mobilised electors within the lowest

[8] This is shown by a comparison of the lists of electors of 1850 and 1852 (Municipal Archives Groningen).

stratum. However, electoral power for many groups did not automatically mean that they were also represented in the Municipal Council.

The members of the Municipal Council

In the first half of the nineteenth century the Groningen electors had hardly any opportunity to exercise their rights. Almost all of the first members of the Municipal Council held their appointments for life. So it is not surprising that there was not much interest in the periodical elections for the election council,

Table 10.4 Income stratification of the Groningen heads of households (%)

Income	1830	1850	1870	1890	1910	Specification
1. *f 4,000*	2.3	2.0	1.6	4.3	3.3	the élite: top civil servants, top professional men, top wholesale merchants, industrialists
2. *f 2,000- f 4,000*	7.0	9.3	3.8	3.2	5.5	the sub-elite: high civil: servants, important manufacturers and merchants
3. *f 1,000-f 2,000*			7.3	5.8	11.4	the upper middle class: trained executives, important tradesmen, teachers (sec. school)
4. *f 500-f 1,000*	14.1	16.1	10.9	16.7	31.7	lower middle class: shopkeepers civil servants, tradesmen
5. Modal *f500*	76.6	72.6	76.4	70.0	48.0	artisans, small shopkeepers, small tradesmen
6.Exclusively *f 500*						labourers, servants, small artisans
% of men of 23 and over with voting power	15.9	21*	20.7	23.4	54.2	*=1852

Sources: Kooij, *Groningen*, 39-49; sample from the Groningen register of population 1830 and 1850; poll tax, register of real property

Explanation: The stratification for 1870-1910 is based on the Hoofdelijke Omslag, a local poll tax, which was set up in 1856. For the first ten years it was based on the value of houses, thereafter on income. For the 1850 stratification the data on house values from 1856 to 1859 have been used. This stratification could be linked to the stratifications of 1870 and later years by comparing the data for 1865 (on house values) and 1866 (on incomes). The values for 1830 are derived from the register of real property and linked to the 1856 data.

No deflator has been used. The only deflator available for the whole period is the index of wholesale prices .[9] The index numbers for 1830 etc. are respectively 100, 105, 125, 99 and 103.

[9] J.H. van Stuijvenberg and J.E.J. de Vrijer, 'Prices, population and national income in the Netherlands 1620-1978', *Journal of European economic history* 11 (1982) 699-711.

charged with filling vacancies. In 1830 only 40 per cent of the members returned their ballots and most votes were in favour of the retiring members. The election council was scarcely larger than the Municipal Council-thirty-two members-all the members of the Municipal Council were included in it, and new councillors were elected from the membership.

In fact, Groningen at that time had an oligarchy of allied distinguished families who, before and during the French occupation, had already formed the local government. Table 10.5 contains a survey. One has to bear in mind that relatives in the first and second degree were not allowed to be members at the same time.

Table 10.5 Families in the Groningen Municipal Council

		Number of members	Period	Related to
	Civil services/professions			
1	Busch / Geertsema	3	1816-1862	7
2	Cremers	2	1816-1882	13
3	Van Iddekinge*	3	1816-1850/1873-1883	6,8,14
4	De Savornin Lohman*	4	1816-1850/1883-1895	6,10,11
5	Trip*	2	1816-1864	8
6	Quintus*	4	1816-1873/1880-1892	3,4,7,9.10.14
7	Feith*	4	1828-1910	1,6
8	Van Imhoff / Van Swinderen *	5	1828-1847/1850-1900	3.5.11
9	Rengers* /De Sitter	2	1844-1874	6
10	Baart de la Faille	2	1851-1895	4.6,11
11	Modderman / Sijmons	2	1865-1910	4,8,10
12	Tjarda van Starkenborg Stachouwer*	2	1867-1910	
13	Tellegen	2	1869-1883-1898-1908	2
14	Wijckerheld Bisdom/ De Marees van Swinderen*		1870-1910	3,6,8
	Trade and industry			
15	Van Olst / Van Calcar	3	1816-1852/1882-1887	
16	Homan / Thieme	2	1835-1849/1876-1883	
17	Roelfsema	3	1852-1859/1873-1876/1882-1910	19
18	Van Houten / Blaupot ten Cate	5	1852-1869/1872-1883/1888-1905	19
19	Mesdag	2	1854-1868/1882-1885	17,18
20	Bennema/Sissingh	2	1884-1901/1908-1910	
21	Smith	2	1893-1910	

Explanation: * means nobility; Column 1 contains relations of the first and second degree (including sons-in-law), column 4 contains relations of the third and fourth degree and also brothers-in-law

Only by 1850 were some outsiders admitted, like the merchant J. Slot, who was born in Koog aan de Zaan. He became mayor afterwards, but was dismissed for incompetence and continued as a common member. The first elections according to the Local Administration Act caused an important change. The number of seats was increased and ten new members were elected. Among them were two shopkeepers, which extended the range of represented occupations.

Table 10.6 shows that in 1816 judges had the strongest position in the Council. In the following years this was taken over by lawyers and some notaries. Since some lawyers were also aldermen, it is obvious that until 1850 the Municipal Council was dominated by people who were paid by the local or central government. This was still the case in the new Council of 1852, but then there was an important rise in the number of representatives from trade and industry. As we have seen, members of the middle class could in theory elect their own representatives. Among the newly elected wholesale merchants, there were indeed at least three who belonged to the upper middle class (category 3), and a producer of tobacco as well. Yet they could not challenge the dominance of the wealth categories 1 and 2.

Even in 1870, eighteen of the twenty-five members belonged to the highest class, and fourteen of them were extremely wealthy.[10] The other members, with only one exception, belonged to category 2. As expected, given the information about electors in the preceding section, the reform of 1887 did not alter the situation much. In 1890, twenty-five of the thirty members belonged to the elite (category 1). However, in 1898 the first workers' representative was elected, the painter J.H. Schaper. In 1901 he was joined by a second representative of the SDAP, the socialist party founded in 1894. This number was doubled as a result of the revision of the election law in 1907.

In 1910 therefore, the occupations of the members of the Council were more differentiated and included the lower strata (tailor, typographer). This diversification was also caused by the emergence of two Christian parties since the end of the 1880s: the 'Anti Revolutionaire Partij' and the 'Christelijk Historische Unie'. The first party claimed to represent the Christian members of the middle classes. For instance, in 1910 two journalists were member of the Municipal Council on behalf of the ARP. The first ARP members, by the way, was jhr. mr. W.N. de Savornin Lohman, who after 1900 joined the CHU.

None the less, the members of the Municipal Council still did not reflect the composition of the electorate. Twenty-two out of the thirty-three still belonged to the elite, and fifteen even to the top elite, who were at least twice as rich. Of the eleven non-elite members, two belonged to category 2 and three to category 3.[11] During the whole nineteenth century Groningen was therefore ruled by members of the elite, who also enjoyed the confidence of the lower strata. Old

[10] P. Kooij, *Groningen 1870-1914. Sociale verandering en economische ontwikkeling in een regionaal centrum* (Assen/Maastricht 1986) 64.
[11] Kooij, *Groningen*, 64.

and often noble families continued to send their representatives, and the ties between them remained close. A truly central position was taken by mr. S.M.S. Modderman, who started as an alderman in 1865 and was mayor from 1893 until his death in 1900. Most dynasties consisted of lawyers, judges and top Civil Servants, but there were some clans of merchants and industrialists as well. The most important was a group of Mennonite wood-sellers, corn-traders, traditional manufacturers of liqueur and paper, and bankers. The Van Calcar, van Houten, and Mesdag families belonged to that group, but in the end almost all Baptist members of the Council-Helder, Hesselink, Schilthuis and Wouters - were related. By the end of the century the presence of the old noble families diminished in favour of more commercial and industrial interests. However, some noblemen had already made the switch to that sector and founded the leading banking-houses 'Geertsema, Feith en Co' and 'Van Vierssen Trip, Feith en Co' which partly arranged the issue of loans by the local government.

Table 10.6 Occupations of the members of the Municipal Council

	1816	1830	1850	1852	1870	1890	1910
Doctors	-	1	-	-	1	1	2
Lawyers, notaries	1	5	4	6	8	8	5
Top civil servants	2	1	5	3	3	3	3
Judges, prosecutors	7	2	3	2	2	4	-
Professors	-	-	1	1	-	1	1
Clergymen	-	-	-	-	2	-	-
Factory owners	1	2	1	2	2	3	5
Wholesale traders	4	3	1	5	3	4	3
Shopkeepers	-	-	-	2	2	3	3
Bankers	-	-	-	-	1	2	2
Others	-	1	-	-	-	1	9
None	2	1	-	-	1	-	-
Total	17	16	16	21	25	30	33

Sources: Almanacs; the Groningen register of population.

The composition of the Groningen Municipal Council in some ways resembled that of The Hague, although its status was somewhat lower.[12] In The Hague between 1889 and 1919, 82 per cent belonged to the highest class, compared with 67 per cent in Groningen in 1910. Besides, in The Hague there were very few factory-owners and no representatives of the labouring class. Yet in The Hague as well as in Groningen, the share of the nobility and haute bourgeoisie was high, though in Groningen somewhat lower: 31 per cent between 1889 and 1919 in the royal residence, against 26 per cent.[13] There are no exact data avail-

[12] P.R.D. Stokvis, *De wording van modern Den Haag* (Zwolle 1987) 320.

[13] According to the criterion of being mentioned in the red and blue books: *Nederlands Adelsboek* and *Nederlands Patriciaat*.

able for Amsterdam and Rotterdam, but Van Dijk points out that in Rotterdam there was not much continuity.[14] The old elite only partly returned after 1813. Migration to The Hague, the seat of the national government, was one reason for that. So already in the first half of the century the Municipal Council was dominated by the interests of new tradesmen.

At the end of the century in the industrialising city of Delft, only three of the traditional ruling families still had seats on the Council. They were replaced by representatives of the traditional trades who still belonged to the elite.[15] The modern industrialists did not show much interest in local administration. This was also the case in Groningen, where the most important industrialist, Jan Evert Scholten, a producer of potato flour, paper and sugar, occupied his seat for only three years. He considered the First Chamber more fitting for his status and a better place to defend his interests. This indicates the political as well as the economic unification in the Netherlands during the nineteenth century.[16] As we will see in the next section, this unification also affected the local Groningen elite, which before the nineteenth century had been rather autonomous in decision-making.

The elite and the local government: a financial survey

The records of local government policy in the first half of the nineteenth century are very skimpy. Only after 1851 do the minutes of the Municipal Council give some insight into the involvement of individual members in different projects. The Municipal Accounts, however, offer some indicators for the preoccupations of the ruling elite.

Figures 10.1 and 10.2 contain a survey of revenues and expenditures. The enormous influence of the Municipal Administration Act of 1851 becomes clear at first sight. This Act urged an increase of expenditures. As the figures show, the revenues were more or less adjusted by taxes, but as we shall see, mostly by loans. The credit balance in most years is artificial. Particular expenditures, which did not figure in the budget, had to be transferred to the accounts of the next year.

The peaks reflect some dramatic episodes in local and national history as well as new local initiatives. In 1826/7 for instance, there was a mysterious epidemic, called the Groningen disease, which might have been some kind of malaria. This enforced expensive preventive measures and support for broken families. This was financed by a loan advanced by the central government. Groningen was affected as well by the riots and disturbances of 1848, which pushed the expenditures for public safety and the relief of the poor to a higher level.

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[14] H. van Dijk, 'Het negentiende-eeuwse stadsbestuur. Continuïteit of verandering', in P.B.M. Blaas and J. van Herwaarden, *Stedelijke naijver* (The Hague 1986) 128-150, 146.

[15] J.A. de Jonge, 'Delft in de 19e eeuw. Van stille nette plaats tot centrum van industrie', *Economisch- en Sociaal-historisch Jaarboek*, 37 (1974) 145-248, 190.

[16] Kooij, 'Peripheral cities'.

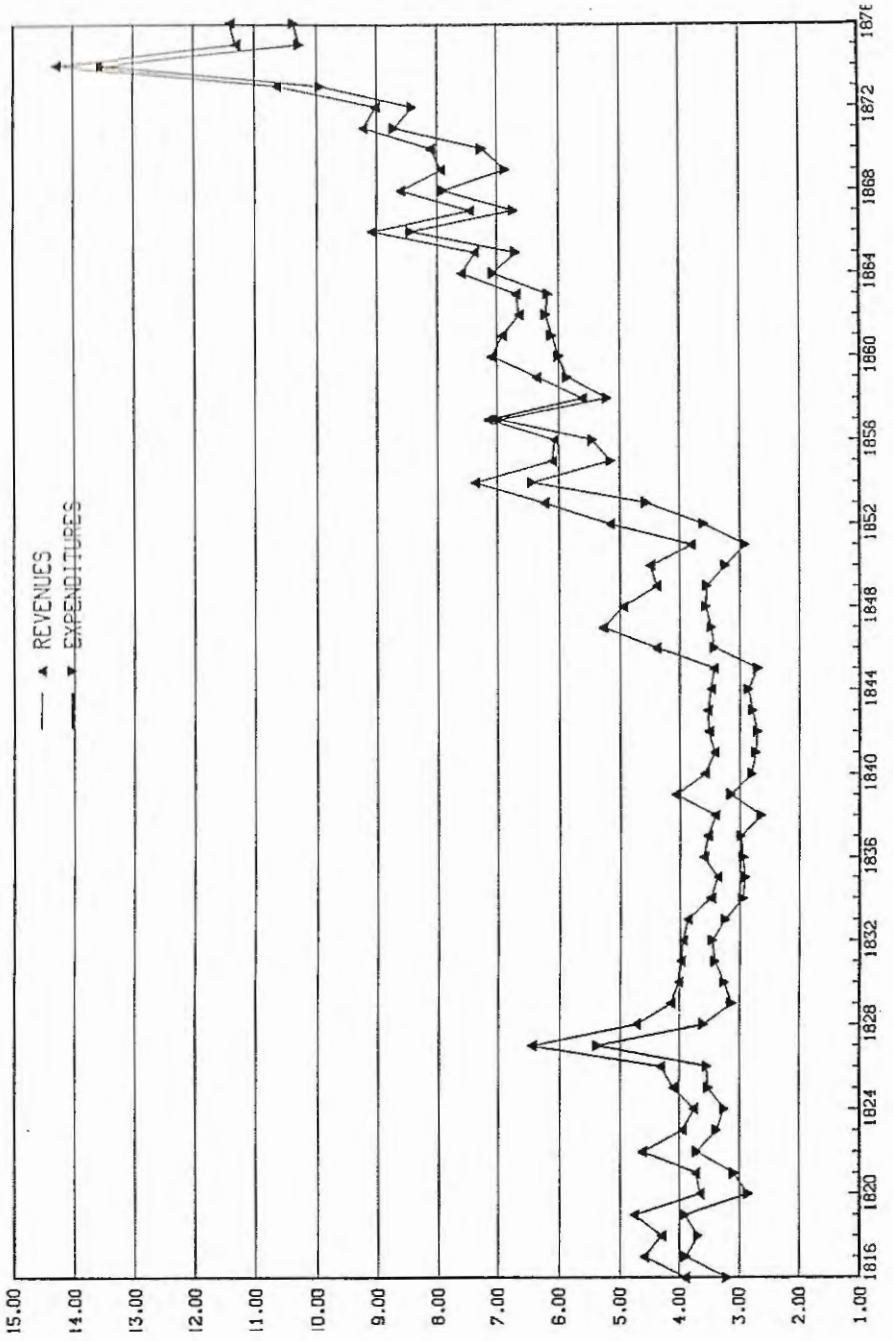

Figure 10.1 Municapal Accounts, Groningen, 1816-76

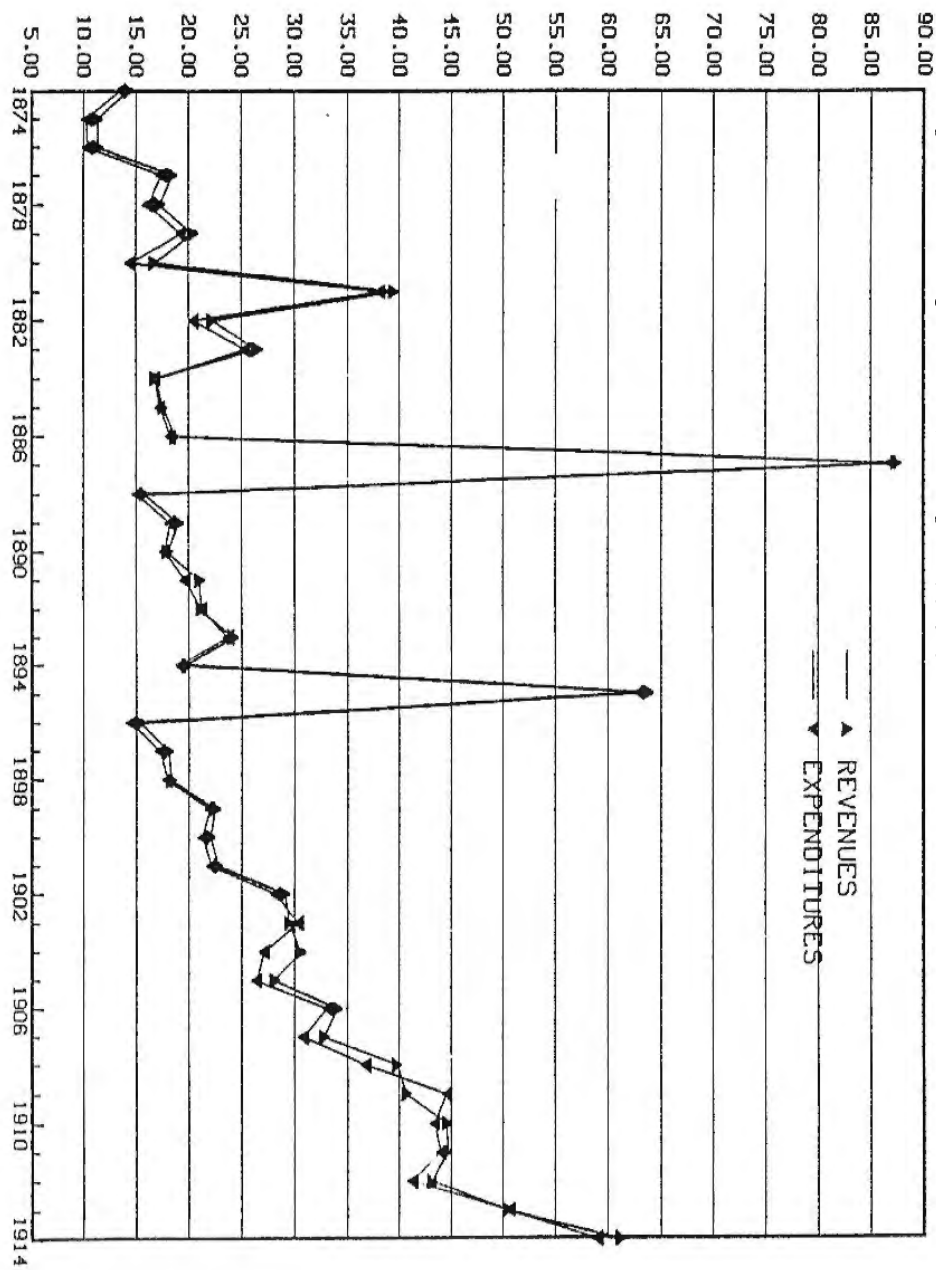

Figure 10.2 Municipal accounts, Groningen 1874-1914

The rise after 1851 was mainly due to an extension of the tasks of the municipal government in the fields of poor relief (Poor Law 1854) and education (Public Education Law 1857). But it also concerned public works and the foundation of public utilities. So the peaks after 1853 were caused by the construction of the local gas works, around 1860 by the building of schools, and in 1865 by the construction of the Corn Exchange and the extension of the gas works.

After 1874 most extra expenditures were made to finance the construction of new waterways, roads, squares and parks after the removal of the fortifications. The removal itself was financed by the state. Around 1900 the construction of a new hospital laid a heavy burden on the local treasury as did the founding of a power-station. Several years later it was the electric tramway which had to be financed. The enormous peaks in 1881, 1887 and 1895 were caused by debt conversion.

Table 10.7 offers some insight into the composition of the Municipal Accounts. During the whole period public works were a major budget item. Part of the public works is also included in the item 'particular expenditures', as will be mentioned below. Table 10.7 also reflects the growth of the urban bureaucracy (item administration), while the reason for the rise of the expenditures for education and poor relief has already been mentioned.

Compared with the cities in the west of the Netherlands, Groningen had high costs for poor relief at the end of the century. This was due to the agrarian depression which struck Groningen as the centre of an agrarian hinterland. The expenditures for health care, placed between brackets, are hidden in the items

Tabel 10.7 Municipal expenditures (x f.1000)

	1816	1830	1850	1870	1890	1910
Administration ⋆	27	25	29	60	87	121
Public works inside the city⋆				111	168	282
	51	60	47			
Public works outside the city⋆				44	67	143
Public safety⋆	13	23	31	43	89	172
(Health care⋆)				(33)	(64)	(122)
Public lighting (including tramway)⋆	10	11	16		41	63
Education⋆	1	10	18	77	336	617
Poor relief⋆	12	36	53	82	146	258
Interests and discharges	62	78	63	117	443	598
Particular expenditures	5	65	30	116	119	1,056
Total	181	308	287	...	1,496	3,310

Source: Municipal Accounts.
Specification: 1830 = the average of 1829-31 etc. For 1870 the costs of public lighting are hidden in the total costs of the gas work.
⋆= including salaries. Money advanced which was paid back during the same year is not included (this is not the case in Figures 9.1 and 9.2).

'public safety', 'education', 'poor relief' and 'particular expenditures'.[17]

The most interesting items in the context of this article are 'particular expenditures' and 'interests and discharges'. Here it is possible to trace the fingerprints the urban elite left on their town. The item 'particular expenditures' contains all the unique undertakings of the municipal government, most of which were not financed by the normal means. Here the local elite could make its own decisions, even though these expenditures had to be approved by the king and later on by the provincial aldermen. Most of the time, however, these authorities did not make any trouble. Almost all of the infrastructural works mentioned above figure in this item.

These particular expenditures were usually financed by loans. There was a long tradition of borrowing in Groningen. The city emerged from the Napoleonic era with a debt of 1,139,992 guilders, accumulated since 1630. Yet the money had been used well. The city had bought and exploited vast areas in the Province of Groningen, most of which, before the foundation of the Republic of the United Netherlands, belonged to Catholic institutions. Most of the estates were situated in the peat area in the south-east of the province, which was therefore called the Peat Colonies. The city left the exploitation of the peat to companies and others. But Groningen constructed an infrastructure of canals, with lucrative tolls, and leased the levelled land. The Groningen household refuse and night-soil were sold to this area for fertiliser. In addition, the city owned some properties in the clay area in the north of the province. In 1855 the net revenue of all these areas was *f.*250,000- which was 50 per cent of all the revenues of the city.[18] While cities like The Hague and Delft started to take loans only after 1851, Groningen had followed this practice in the first half of the nineteenth century.

Table 10.8 offers a complete list. These loans became a real burden for the local government. Since the rents in the Peat Colonies were fixed for centuries, known as *beklemming* revenues from that area did not rise very fast. The other revenues came from indirect taxes while a smaller part consisted of surcharges on direct taxes.

In 1855 indirect taxes were partly, and in 1865 completely abolished.
They were replaced with 80 per cent of the local revenues of the direct taxes, plus surcharges. The cities were also allowed to raise school fees.[19] Besides, cities had the opportunity to create a poll-tax, the Hoofdelijke Omslag. However, its level was kept very low for a long time. Most elite members of the Municipal Council were in favour of this limitation. Their main argument was, as in other cities, that a high poll-tax might drive away the wealthiest inhabitants to neighbouring villages, where those taxes did not exist or were at a much lower

[17] Kooij, *Groningen*, 267-7.
[18] S. Sybenga, *Geldleeningen en schulden der gemeente Groningen* (Groningen 1916) 5.
[19] W. Meijer et. al., 'De financiën van de Nederlandse provincien en gemeenten in de periode 1850-1914', *Economisch- en Sociaalhistorisch Jaarboek* 33 (1971) 27-67.

Table 10.8 Loans taken by the Groningen Municipal Council

1827	150,000	4.5%	Groningen disease
1832	55,000	4.5%	Poor relief; citizen soldiery
1833	55,000	4.5%	Poor relief; repercussions of the Belgian war
1838	50,000	4%	Discharge debt of 1827
1846	180,000	4%	University building; poor relief; public works
1850	55,000	4%	Budgetary deficit
1853	250,000	4%	Gas works
1854	100,000	4%	Gas works
1857	38,000	4.5%	Gas works
1859	15,000	4%	Building of schools (Public Education Act)
1860	100,000	4%	Building of schools
1862	47,500	4%	Participation in the construction of a canal
1864	108,000	4.5%	Secondary schools; public works
1865	30,000	4.5%	Corn exchange; secondary schools
1866	125,000	5%	Discharge old debts; gas works; canal
1867	40,000	5%	Roads
1868	63,000	5%	Road to Hanover
1873	185,000	4.5%	Streets
1874	196,000	4.5%	Streets; public works in the Peat Colonies
1874	167,000	4.5%	Public works; school
1876	103,000	4.5%	Public works
1877	65,500	4.5%	Public works
1878	188,000	4%	Streets; harbour; schools
1879	740,000	4.5%	Bridges and other public works; schools
1880	326,000	4%	Public works (initially refused by the Province)
1881	348,000	4%	Conversion loan
1882	423,000	4%	Public works
1883	982,000	4%	Conversion loan
1884	130,000	4%	Schools; harbour; roads; fire brigade
1885	216,000	4%	Public works
1886	180,000	3.5%	Sewage works; planting; bridge; school; gas works
1887	4585,000	3.5%	Conversion loan
1889	331,000	3.5%	Conversion loan; public works
1891	309,400	3.5%	Cattle market; gas works
1893	107,000	3.5%	Public works
1894	64,000	3.5%	Public works
1895	270,780	3%	Gas works
1895	4792,200	3%	Conversion loan
1897	105,000	3.5%	Abattoir; public works
1899	839,800	3.5%	Hospital; abattoir; sewerage; theatre; gas works
1902	900,000	4%	Hospital; power-station
1904	500,000	3.5%	Power-station; water works; police station
1906	900,000	3.5%	Power-station; tramway; public works
1907	490,000	4%	Hospital; gas works; public works
1908	1053,000	4%	Hospital; gas works; public works
1910	1000,000	3.5%	Tramway
1911	900,000	4%	Power-station; water works
1912	1200,000	4%	Gas works; public works
1913	5000,000	4.5%	Gas works; power-station; public works
1914	500,000	4.5%	Public works

Sources: Minutes of the Council; Resolutions of the Municipality, municipal accounts.

level.[20] So the city had to borrow, and since the terms were rather long, sometimes even ninety years, and repayments were small, they had to borrow again or to sell some city properties to pay the interest.

In 1900 the city already had a debt of about *f.*5,200,000.-, which was *f.*78.- per inhabitant. In The Hague in that year the debt burden per inhabitant was *f.*113.51 (amount of the debt *f.*23,386,000.-); in Rotterdam *f.* 73.42 (amount. *f.*47,636,000.-); and in Delft *f.*63.31 (amount *f.*2,000,000.-).[21]

As indicated above, the Municipal Council of The Hague was the most aristocratic one, while in Rotterdam and Delft commercial and industrial interests prevailed. In Groningen these two intermixed. So it seems as if there was some correlation between the level of aristocracy in the Municipal Council and the level of the debt. Indeed the old aristocracy had interests in loans, as private persons and as administrators of orphanages, of homes for the old and infirm, and other institutions, which were important creditors. There was much opposition from that quarter whenever the mayor and his aldermen proposed to convert old loans into loans with a lower interest rate. On the other hand, the elite did not have scruples about withdrawing their money when the rate of interest rose. This happened for instance in 1864, when 75 per cent of the 3,5-4 per cent terminable debt, dating from the ancien regime, was withdrawn. The ruling elite then decided to issue a new non-withdrawable loan at 4,5 per cent interest.[22]

The municipal loans were therefore partly used by the local elite to improve their financial position. They also kept the direct-tax burden rather low. In 1902 it was *f.*6.50 per inhabitant. Compared with other large cities, this was lower than in Amsterdam (*f.*9.91), The Hague (*f.*8.34), Haarlem (*f.*8.61) and Arnhem (*f.*7.68) but higher than in Rotterdam (*f.*5.82), Utrecht (*f.*6.27) and Leiden (*f.*5.24).[23] Of course these amounts are related not only to politics, but also to prosperity and social structure. Leiden, for instance, was a poor city with relatively high unemployment, while the non-paying working class in Rotterdam, Groningen, and perhaps also in Utrecht was large. The Hague and Arnhem were primarily residential cities with a larger upper class.

In the 1890s and especially after 1900, the debt of Groningen rose considerably to *f.*11,000,000.- in 1916, and the financial situation became rather critical. Groningen was not exceptional. The debt of The Hague, for instance, rose to 73 million guilders in 1914 and that of Rotterdam to 106 million, while there was not much inflation at that time. Most of the profits of the public utilities had to be used for interest and amortisation. The debts would have been even larger if the national government had not given some subsidies from time to time for specific tasks, which were partly mandated by new laws such as the Health Care

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[20] Kooij, *Groningen*, Appendix B.

[21] Estimated from *Geschiedkundig overzicht van de wijze van dekking der buitengewone uitgaven van de gemeente s'Gravenhage* (The Hague 1916); R.E. Berends, *De ontwikkeling der Rotterdamsche gemeenteschuld van het jaar 1851 af tot den wereldoorlog* (Arnhem, 1932); De Jonge, 'Delft'.

[22] Minutes of the Municipal Council, 1864/5.

[23] F.A.M. Messing, *Werken en leven in Haarlem 1850-1914* (Amsterdam 1972) 127.

Act and the Housing Act of 1901.

Still, it was not until 1915 that the provincial aldermen raised questions about the Groningen habit of borrowing for every expenditure that in some way was unusual.[24] Until then, only in 1880 was a loan refused, because the purposes were not indicated at all.[25] So the urban elite had a free hand in spending money on matters they deemed important.

When we take into account the list of loans, it is apparent, that the urban elite liked to spend primarily in two areas: the urban environment and public utilities. There was also some preoccupation with education, but this was mainly enforced by the central government, which for instance ordered the institution of at least one secondary school in cities of more than 10,000 inhabitants. In this field, it was above all the university which captured the attention of the urban elite. In 1876 a serious threat arose that this institution might be closed, but the efforts of Groningen members of the central government and of the Second Chamber avoided the worst. Large loans were also made for health care, most of them for the construction of a new hospital.

A better view of the policy of the urban elite can be derived from an analysis of the decision-making on matters mentioned above. This will be done for some cases in the next section.

Some cases

Politics in the province and city of Groningen was characterised and complicated by a mixture of cleavages. First, there was the old animosity between town and country. The Groningen hinterland frequently tried to eradicate the city's domination. At first this movement was headed by the gentry, but in the nineteenth century the liberal farmers took the lead.

Second, there was the opposition against the central government. For a long time Groningen claimed to be an independent city-state and tried to remain as autonomous as possible within the Dutch Republic. This was frustrated by Napoleon and the formation of the Kingdom of the Netherlands with a strong central power. The Groningen farmers took advantage of this movement and especially advocated the constitutional reform of 1848 to slacken the domination of the city. In some ways, the provincial government at that time acted as an extension of the central government, with the Governor, after 1848 called Commissioner of the King, as a viceroy. On the other hand, however, many members of the urban elite families participated in the provincial government. Before he became a mayor, for instance, De Sitter was a provincial as well as a Groningen alderman who completed his career as a member of the Second Chamber in The Hague.

Structural antitheses were also traversed by personal loyalties. This complicated structure resulted in a range of ad hoc coalitions dependent on the issue at

[24] Sybenga, *Geldleeningen*, 23.
[25] J.H. Geertsema, *De geldleeningen der gemeente Groningen* (Groningen 1895), 47.

stake. When, for instance, the province forbade the city to extend the cattle market, the city called in the assistance of the Minister of Internal Affairs, at that time a member of the Groningen family De Savornin Lohman. He was not the only Groningen person who became a member of the central government. Of course the urban elite tried to take advantage of that.

Within the city itself an antithesis of a somewhat different character divided the old elite and *homines novi*. As a result of the economic integration of the Netherlands, Groningen combined its functions as a centre for its region with a position in a national urban network based on specialisation.[26] At least four industrial sectors obtained national importance: the printing-industry, the food and allied products industry, the manufacture of ready-made clothing and the production of bicycles.

This development brought wealth to people who had other interests than the establishment. As mentioned before, these nouveaux riches seldom became members of the Municipal Council, partly because they did not aspire to office, but also partly because membership was given to natives in the first place. Many owners of the new factories originated from outside the city, some even from Germany. However, the new economic orientation in Groningen also influenced the traditional wholesale trade, which became more and more (inter)national. The grain trade is a good example. This sector was indeed represented in the Council.

There was almost no intermarriage between the old noble families and members of the elite from trade and industry. Yet in administration there was always a mixture of aldermen from both sides. The centralising policy of The Hague sometimes resulted in the appointment of a mayor from elsewhere, but they were not very successful. J. Slot (1853-62) has already been mentioned. B. van Royen (1872-80), born in Zwolle (also the birthplace of Prime Minister Thorbecke), suddenly resigned 'longing for a quieter life' and J.N.A. Bucaille (1883-93) from Voorburg near The Hague suffered from dementia.

The complicated mixture of different interests can be demonstrated by the three major issues in municipal politics, which took the greater part of the special expenditures.

Public utilities

The municipal interest in public utilities started with the construction of the gas works, which opened in 1854. The coincidence with the new composition of the Municipal Council is striking, but this was partly accidental. The aristocrat De Sitter was an advocate as well as the retired mayor Baron van Imhoff. The argument that the city should be the first beneficiary, however, was originally put forward by the new members from trade and industry, already before 1851. The decision not to give a concession to private firms but have the city operate

[26] Kooij, 'Peripheral cities', 361.

the works was taken as early as 1845. However, the King refused consent for strategic reasons. This enforced the unity in the Groningen Council, which even sent a delegation to The Hague. However, they had to await the revision of the constitution, until the new King accepted.

The financial success of this enterprise encouraged the Council to create other public utilities. The initiatives were taken by representatives and aldermen from trade and industry, but the old families readily agreed. Together they frustrated initiatives by individual members of the Council or other members of the elite. Thus in 1895 Jan Evert Scholten, by far the richest man in the city, did not gain a concession to construct a power station.[27] A municipal station started in 1902. Apart from the profit motive, the main argument was that the elite wanted this luxurious and efficient method of illumination for themselves, their shops and their city, in that order. They took example from the 'luxurious city', The Hague, and hired an adviser from that city. Even the councillors from trade and industry did not speak about the electric motor, which was to be extremely important for the small-scale Groningen industry.[28]

The corn exchange (1865), cattle market (1892) and the slaughterhouse (1900) for which a concession was refused to some Belgians, were established as municipal enterprises. The horsedrawn tramway was left at first to private exploitation. It started as a Belgian enterprise, and in 1896 was taken over by some locals, among them J.E. Scholten and the former member of the Council, jhr. W.C.A. Alberda van Ekenstein. However, as the Council had expected, the large profits failed to come. The tramway was eventually taken over by the city and transformed into an electric system (1910). This was especially advocated by the socialist members of the Council. The top elite retained their carriages.

The waterworks (1878) were the most important public utility in private hands. The concession was granted by a one-vote majority to two doctors from Leeuwarden. One of them was M.E. Baart de la Faille, who got the support of his Groningen relative in the Council, who, however, abstained from voting.[29] When the enterprise proved to be profitable, the municipality tried to take it over. In 1912 it eventually succeeded, after some lawsuits. According to probate inventories, many members of the Council were shareholders, the former member R. Feith was even director. The minutes of the Council do not reveal whether and how they served their own interests.

In the case of public utilities it is obvious that the elite members of the Council were motivated by the interests of their own group in the first place. In a way, they also considered the public utilities as their own firms. This is not surprising: their terms were very long, which enlarged their commitment.

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[27] P. Kooij, 'De eerste verbruikers van electriciteit in de gemeente Groningen 1895-1912', *Economisch- en Sociaalhistorisch Jaarboek*, 35 (1972) 274-303, 278.
[28] Kooij, 'Eerste verbruikers'.
[29] Minutes of the Municipal Council, 12 January 1878.

Town planning

In 1874, when Groningen was allowed to demolish its fortifications, a conflict arose between the municipality and the state on the ownership of the land. Groningen did not dare to take legal action, which testifies to the relationship.

The central government were to level and prepare the ramparts. However, the municipality stipulated it was to develop the area. Therefore a specialist was hired, Bert Brouwer, again from The Hague. The Minister had no difficulty with this, all the more because the plans had to be conspicuous, which caused the prices of the lots for sale to rise. Town planning now became the first indulgence of the ruling elite and they borrowed huge amounts to create for themselves a suitable environment.

First, the ramparts in the north of the city were bought and transformed into a park. An additional argument was put forward, that the moat could be used by woodsellers for storage. Most of the levelled land in the west and the east remained the property of the state. Eventually large university buildings were to be constructed here, like the new hospital.

Most attention was paid to the area in the south, near the new railway station. Beautiful boulevards and squares were constructed here. The Groningen elite bought parcels of lands for the construction of villas. At least seventeen members of the Municipal Council moved to that area between 1880 and 1910. The members from trade and industry were underrepresented. For the greater part they went on living near their enterprises and shops. In the neighbourhood of the boulevards expensive schools were constructed, and a new museum as well as a fire-station, and a campaign was started to move prostitution from that area.

Commercial interests were also taken into account. For instance two new harbours were constructed. One of them was situated at the end of the Eemskanaal (1876), which became the new connection with the sea. This canal was financed by the province to stimulate the building of larger ships. The urban members of the provincial estates advocated the construction of the canal to support the aspirations of the city as a sea port. This did not work out very well.[30]

The close attention paid by the elite to their own immediate surroundings provided a violent contrast to their involvement in the construction of working-class houses. This was left mainly to landowners, who were allowed to divide their properties into small lots, provided that these houses were out of sight. However, a number of the Council's members were involved in the three housing associations existing before 1900, either as a board member or as a shareholder. Nevertheless, they withdrew their money, when the dividend was fixed too low. These associations usually let their houses to members of the lower middle class. [31]

In the 1870s only three members of the Council pleaded for an overall view

[30] Kooij, *Groningen*, 360.
[31] Kooij, *Groningen*, 216-227

on town planning. This was enforced by the Housing Act (1901). An extension plan was made by city architect Mulock Houwer. Then again the Council did not allow individual members of the elite to pursue their own interests. They protested in vain against the planning of a road on their land instead of lucrative houses.[32]

The Hospital

At all government levels there was a keen interest in the replacement of the ramshackle municipal and academic hospital with a modern one. The ruling elite in the city needed it for poor relief and to keep those suffering from contagious diseases out of their way. The province wanted a central facility for health care, which could cope with the growing demand. Also, the state wanted to provide the university with a modern hospital.

In 1872 the municipality already tried to obtain subsidies from the state. They gained the co-operation of the Minister of Internal Affairs, J. H. Geertsema, who once was a member of the Groningen Municipal Council. Unfortunately he had to leave and his successor postponed the decision because of the bleak prospects of the university.

Once this was settled, the parties involved discussed their financial contributions for twenty years. The Professor of Surgery, Koch, even took a seat in the Municipal Council to accelerate decision-making. Eventually the terms of the city were accepted. The amount to be paid by the state, in years to come, was to exceed that of the construction costs lent by the city, including interests.[33] This was advanced because the Minister involved in the final negotiations was A.F. de Savornin Lohman.

The Groningen elite could afford to wait. The university was an impatient interested party. Moreover, in the meantime a Protestant and a Catholic hospital were founded, where the elite preferred to be nursed. Of course one of these hospitals was situated along a boulevard in the south of the city.

Conclusion

Already in the first half of the nineteenth century, taking Groningen as an example, some members of the middle classes had the right to elect members of the Municipal Council. After 1851 only the lowest stratum was excluded. This did not result in proportional representation. During the whole century the Municipal Council was dominated by the local elite. The margins of the policy of this elite were defined by higher political institutions. Yet they had a relatively free hand in the creation of public utilities and in town planning. Their actions in these fields were financed by loans.

The policy of the elite was in the first place inspired by the interests of their own group. Councillors from the Civil Service and the professions worked to-

[32] Minutes of the Municipal Council, March/April 1904.
[33] Kooij, *Groningen*, 270.

gether most of the time with those from trade and industry, though public utilities were initiated by the second group. The fortune of the city was translated into the fortune of the elite and the success of their administration. This view was reinforced by the long terms of the councillors and the continuity in representation of the established families, related to a relatively low geographical mobility within the leading group.

11

Dutch and Russian regions compared. Demographic development in the 19th century.[1]

Introduction

Since 1991, Dutch research groups in Groningen and Utrecht have been co-operating with Russian research groups in Moscow, Yaroslavl and Tambov in the field of regional history of the nineteenth century. This joint research programme is sponsored by NWO, the Dutch organisation for scientific research, which in 1993 initiated a programme for support for scientist in the former Soviet Union.

The start of this joint programme was completely accidental. In 1990 a group of Russian scholars, mainly from the Moscow archives, attended the centennial of the Dutch organisation of archivists in Groningen. There they became acquainted with the Dutch research programme 'Integral History' of the (economic) historical departments of the universities of Groningen and Utrecht. This programme contained many aspects which in Russia also were studied within the context of the programme 'Culture of the Russian province' which had been initiated by the Cultural Institute in Moscow.

Dr Vitaly Afiani, at that time the coordinator of the project 'Culture of the Russian Provinces', was looking for a new methodology. In his view regional history was a neglected item in Russian history, yet the events of 1917 can only be understood if a regional setting is involved. However, what was done in the field of regional history was too archeographic and encyclopedic, and also too top-down oriented to offer relevant explanations. He thought that our Dutch project Integral History could offer the framework they needed.

The project 'Integral History'

The aim of the 'Integral History' project is to reunite a number of diverging paths within the historical discipline, which at the moment is characterised by growing specialisation and mutual misunderstanding. In many ways the project is a tribute to the French Ecole des Annales which always promoted 'histoire totale'. Our approach, however, will be more theoretical. We intend to develop, along empirical ways, a model of societal change in a regional setting. This, indeed, is a pretentious effort which only has a chance of succeeding if it is begun

[1] First published in: Carel Horstmeier, Hans van Koningsbrugge, Ilja Nieuwland, Emmanuel Waegemans (eds.) *Around Peter the Great. Three Centuries of Russian-Dutch Relations* (Institute for Northern and Eastern European Studies: Groningen 1997) 115-124.

on a modest scale.

Therefore restrictions in time and space have been set. The project covers the period 1770–1914, a period in which major transitions took place in every field of society. As yet our research is also restricted to two regions: the Groningen clay area in the north east of the Netherlands and the 'Meierij van Den Bosch' in the province of North Brabant in the south of the country. Both regions show clear differences. The Groningen clay area was characterised by large-scale agriculture, while in the sandy area of North Brabant farms were rather small. Moreover in the 'Meierij van Den Bosch' almost all inhabitants were Roman Catholics. In the Protestant Groningen clay area the Catholic denomination consisted of only a small minority of the population. This region was the cradle of an important secession movement of orthodox Protestants.

Nevertheless there were some resemblances. At the beginning of the period under research both regions were dominated by large regional capitals, the cities of Groningen and 's-Hertogenbosch. However, during the course of the nineteenth century the central position of 's-Hertogenbosch was challenged by Tilburg and Eindhoven. The fast growth of these two cities was caused by industrialisation: woollen industry in Tilburg, and Philips and other plants in Eindhoven. In the Groningen area there was also some industrialisation (potato-flour, strawboard, machinery) but the city of Groningen remained the gateway to other regions and outnumbered by far second rank cities like Winschoten and Appingedam.[2]

At first sight politically there were also some resemblances, such as the large distance from The Hague, the political centre of the Netherlands. But a second look shows that the situation was quite different. Until 1813 North Brabant was governed directly by the central administration while Groningen was a fully fledged member of the Dutch Republic. When the Netherlands became a united kingdom, politicians from North Brabant tried to become involved in the national government whereas Groningen tried to stay as independent as the new order admitted.

By comparing the two regions we are trying to find out which developments had a more universal character and can be used for the model, and which ones were region-specific. Then our conclusions must be tested in other regions to show whether the interrelations between the societal variables we have figured out are also manifest elsewhere.

The research programme

The research programme consists of four main streams:

1. cohort analyses: From 1810 on, with intervals of 20 years, birth cohorts are taken from the parish registers and the registers of population. The cohort-members are followed throughout their lives, as long as they stay within the area.

[2] Pim Kooij, 'Peripheral cities and the Dutch urban system in the Netherlands until 1900', *The Journal of Economic History* (1988). See also this volume.

This enables us to analyse demographic behaviour, social mobility, migration, and the functioning of the labour market.

2. structure analyses: For benchmark years, a complete survey of the population is derived from the registers of population in order to reconstruct the occupational structure, and, combined with financial and other sources, the social structure.

3. the analysis of municipal accounts: These accounts are computerized in a certain way to create a possibility to reconstruct the occupations of the municipal administration over a period of 150 years. They reflect the major changes in the local community as far as money was concerned. Of course the minutes of the Municipal Council are used to obtain additional information. Moreover, the appendices of the municipal accounts, which escaped destruction in some places, provide valuable data on wages and prices, which enables us to reconstruct the standard of living.

4. the analysis of regional newspapers: This line of research is intended to collect events and opinions in the political, social, cultural, and economic domains, which cannot be found in the archives. This includes the analysis of advertisements and announcements.

As an addition to these main streams, individual graduate students are preparing doctoral dissertations on specific subjects such as: production and the labour market, trade and transport, industrialisation, education, health care, group and party formation, social control and criminality, the impact of the Roman Catholic church, and urbanisation.

Since it has proved impossible to perform these analyses in all municipalities in the two areas, 10 municipalities are selected from each region: the regional capital, two smaller cities and seven villages. Of course the other municipalities have also been taken into account, but in a less detailed way.

For these villages and the regions as a whole, the impact of the major societal transitions are being studied:

- demographic (leading to low birth and mortality rates)
- political (the breakthrough of liberalism and socialism)
- economic (the transition from a mainly agricultural production structure to one characterized by industry and services)
- social (the emergence of new forms of social inequality related to higher social and geographical mobility)
- cultural (the impact of the Enlightenment)
- religious (the rise of secession movements within the established church, emancipation of discriminated denominations).

Russian involvement

The Dutch regions have been analysed in a number of books and articles.[3]

[3] See for instance Pim Kooij (ed.) *Dorp naast een stad. Hoogkerk 1770/1914* (Groningen 1993), and Jan van Oudheusden and Gerard Trienekens (eds.) *Een pront wijf, een mager paard en een zoon op het seminarie. Aanzetten*

The aim of the cooperation with Russian researchers is an initial international comparison. For this comparison, two regions have also been selected in Russia which, as in the case of the Netherlands, show clear differences. These are the Yaroslavl region and the Tambov region.

The city of Yaroslavl, the centre of the Yaroslavl region, dates from the 9th century. In the 16th and 17th century this city was at its zenith. At that time, the city on the Volga was a distribution centre for goods from the harbour of Arkhangelsk and at the same time a distribution centre for agrarian products from its own region. The foundation of Saint Petersburg hampered the further development of Yaroslavl as an interregional distribution centre, but in the nineteenth century, partly due to the connections to the railway system, Yaroslavl developed into an industrial city (textiles, leather, food processing, including tobacco).

In the Yaroslavl regions three villages were selected:[4]

- Velikoye in the Yaroslavl district (districts were founded in 1777) an industrialised village characterised by linen and boots industry.
- Vyatskoye in the Danilov county, an agricultural village which had also some trade.
- Ilyinskoye a typical bears nook in the Poshekhoniye district in the north, which was owned by lady Ekaterina Khanykova. In this village dairy farming was the main source of income.

All villages in the Yaroslavl region were characterized by strong seasonal migration towards the cities. This was already happening before 1861 in the times of serfdom. The productivity of the soil was very low. Therefore the owners of serfs preferred to be paid taxes instead of receiving a part of the harvest (this phenomenon is called quitting).

Tambov is situated in the south in the region of chernozem - black earth. The city of Tambov has its origin in the middle of the 17th century as a fortress for the defence of Moscow. It developed into a trading centre for agricultural products. The arable parts of the Tambov region were very densely populated. Therefore a lot of peasant migration took place, for instance towards Siberia to enlarge their allotments of land.

Apart from the city of Tambov, which is now being studied in the same way as the city of Groningen, the Tambov research group concentrated on the village of Malye Pupki (Kazinka).[5] This village was founded in 1648 and by the beginning of the 19th century it had about 2500 inhabitants. The main occupation of the inhabitants was arable farming. Cattle farming was less important.

Sources and methodology

To enable comparisons between the Dutch and the Russian developments, in the first stage of our joint project we concentrated on cohort analysis, and to a

tot een integrale geschiedenis van oostelijk Noord/Brabant ('s-Hertogenbosch 1993).

[4] By a research group at Yaroslavl University, headed by dr. Irina Schustrova and dr. Elena Sinitsyna.

[5] The research group at Tambov University is headed by prof. Yuri Mizis and dr. Sergei Esikov.

lesser extent on structure analysis. The available sources for demographic development in both countries are slightly different:

In August 1811, in the Netherlands the registration of births, death and marriages by the churches was replaced by a registration by the state, the civil registration. This was the work of Napoleon. A year later he probably wanted to do the same in Russia, but the Russians stopped him. With hindsight, from a researchers point of view this is a pity because the quality of the civil registration is much higher.

The civil registration is the main source for our research in the field of demography in Brabant and Groningen. For the years 1811, 1830, 1850 and 1870 for each village we have taken 120 birth certificates from the civil register, that is, roughly the number of children born in a year in an average village (for the capitals we take double the number). The birth certificates contain information concerning the parents (age, occupation, ability to write). We try to follow the 120 members of every cohort throughout their lives. For many of them we find a death certificate very soon, for infant mortality was very high. For the more fortunate, at a given moment we find a marriage certificate containing information on the occupations of the partners and also literacy. Very soon after that the birth certificates of the children of the married couple appear.

In a number of cases the women lived until the end of her fertile period. For such a family demographic characteristics such as the number of children, the intervals between births and other matters can be analysed.

After the birth certificates of the children, the death certificate of the cohort member finally follows.

However, the number of cohort members that stayed in their village of birth for their whole lives was a minority. In general, by the age of 20 about a third of the cohort was dead, one third still lived in the village and one third had left the village, together with their parents or alone.

Their vicissitudes, death, marriage, birth of children are written down in the civil registration of other municipalities. But in which ones? At that time the Netherlands had about 2500 municipalities. It is, of course, not possible to search all these registrations. Nevertheless we have been able to find a large number of these migrants in neighbouring villages and in the regional capitals. Fortunately lists are available covering all births, marriages and deaths in the province of Groningen as well as Brabant in alphabetical order. But if the cohort members had crossed the boundaries of the provinces, they do not figure in these lists.

For the 1850 and 1870 cohorts this problem no longer exists. The reason for this is the introduction in 1850 of population registers based on a census which was held every ten year. In large books, all families were recorded at the beginning of the period of ten years. All mutation were also noted, for instance when a family moved within the municipality, but also when it moved to another municipality. So from 1850 on we know where we have to look for them. The births of children were also written down in the registers of populations, which

gives us indications for the dates of the birth certificates which we continue to use for the period after 1850 because they contain extra information, for instance on literacy. However, some people have still been lost because not everyone informed the municipality about their departure.

The population registers also provide information about changes in occupation and religion because the actual situation was written down every ten years, after the census.

In Russia the first real census was not held until 1897. This, however, is a magnificent source of information. The number of questions was very large and it also contains some retro-information. Unfortunately, information on the individual level is no longer available for many villages and towns.

The Russian counterparts to the Dutch sources are the parish registers (Metricheskie Knigi) They do not have the disadvantages of the Dutch parish registers of the 18th century because in Russia there was a dominant religion whereas in the Netherlands there were many churches each with its own registration.

The parish registers were kept in duplicate by the priests. Nevertheless, some of them have gone missing. In Tambov, for instance, 10 volumes concerning the years between 1875 and 1890 have vanished, which is indeed a great problem.

The parish registers contain three sections; on births, on marriages and on deaths.

The reliability of the parish registers depends on the accuracy of the priests. Unfortunately they contain a lot of variations in information about ages and names. For instance: when a man lived in his wife's parents' house, he sometimes adopted the name of that family, returning to his own name when he started to live on his own. This does not make it easy to identify the same person in the registers.

On the other hand the parish registers contain some information which cannot be found in the Dutch civil registration, for instance about illegitimate children and about migration. Even the causes of death are given, although these are usually not very accurate. Some priest give as a diagnosis: 'God's will'.

Before the introduction of the census, the counterpart of the population registers were the revisor's books. In these books the data on families was noted and compared to the previous revisor's books, which had been completed some years before. The revisor's books, which were mainly tax lists, also contain some information on migration. Unfortunately, the last revision was held in 1858. Therefore there is a gap between 1858 and 1897.

In the Yaroslavl region there is an extra source, the confession books (Ispovednye Rospisi) which were also kept by the priests and were controlled by army officers. They contain information on age, legal status and also temporary absence.

By comparing carefully these three sources, the Russian research groups, which the help of the Dutch computer programmes, succeeded in constructing

the lives of a large number of cohort members. And the search is going on, in Russia as well as in the Netherlands. The last part of this article contains some preliminary results, which will soon be published in a wider context in the book *Where the Twain Meet. A Comparison of Dutch and Russian Regional Development in the 19th Century*.

Some results

A. Infant mortality

Table 11.1 presents the results for two Russian villages, the village of Hoogkerk in the Groningen region, and the villages of Veghel and Schijndel in the Brabant region.

Table 11.1. Infant mortality (percentage of cohort members)

	1830				1870			
	0-1		1-5		0-1		1-5	
	male	fem	male	fem	male	fem	male	fem
Malye Pupki	5	4	6	11	18	12	6	7
Vyatskoye	41	42	4	17	51	39	2	9
Hoogkerk	10	6	4	9	20	7	9	16
Veghel	40				44			
Schijndel	28				32			

Cohort analysis is not an appropriate technique for an overall view of child mortality. The death certificates of the Population Registration are a better source because they contain deaths at all ages whereas cohort analysis pivots on one generation. For instance. in the north of the Netherlands there was a smallpox epidemic in 1871. Therefore the mortality rates are very high for children in the 1-5 range.

Nevertheless, some information can be obtained from cohort analysis because it provides the opportunity to link together several characteristics of the deceased, for instance social status. In Hoogkerk we noticed that until the end of the century a higher social status did not reduce the risk of dying for young children.

The most striking information in table 11.1 is that there are large differences in the death rate between the villages. It is high in the Yaroslavl village and the Brabant ones, and rather low in Malye Pupki and Hoogkerk. We are not quite sure what the reasons for these differences are, but one important reason may have been in the Netherlands that children in Groningen were breast-fed and children in Brabant bottle-fed, but there is an on-going discussion about that point.

At any rate, table 11.1 shows that the mortality pattern in some Groningen village resembles that of Russian villages more than that of Brabant villages.

B. The age at marriage

It is well known that people in Russia married very early. Table 11.2 reflects that pattern. On the other hand, the age at marriage in the Netherlands was rather high. This is what Hajnal had in mind when he formulated his Western European marriage pattern. People in Western Europe did not marry before they could support a family of their own, while the people in the East, because of the special occupational structure in the villages - they worked in family units - had the opportunity to marry earlier.

The demographic transition in the west changed this pattern. The table indeed reflects the fall of the age of marriage, first in the city and later in the country. However, in Russia the opposite was the case. There a rise in the age of marriage occurred. As a result the differences between Russian and Dutch villages became minimal by the end of the century, especially when we compare the Groningen villages with Vyatskoye.

What we cannot explain yet is that the girls in Malye Pupki were older than their husband, whereas in all other cases the grooms were older. Such a pattern of older brides mostly occurs when there is a lot of migration. Migration, however, was much higher in the Yaroslavl district.

Table 11.2. Average age at marriage

	1810		1830		1850		1870	
	male	fem	male	fem	male	fem	male	fem
Malye Pupki	18.5	20.8	18.6	19.8	18.3	18.7	19.7	20.0
Vyatskoye	22.0	22.4			23.3	23.7	26.3	25.3
Velikoye	20.5	18.9	20.5	20.1	22.7	20.6	24.5	21.9
Groningen villages	28.9	26.9	28.7	26.6	27.9	25.8	26.4	25.3
Groningen city	28.2	27.7	28.1	27.9	26.9	27.1	27.0	26.1

C. Intervals between births of successive children

Cohort analysis enables us to measure the intervals lying between the births of successive children. In this way we can measure the effects of different feeding methods. We also obtain information on the practising of birth control. Although our information is not yet complete for all the regions involved (Yaroslavl is still missing) the tables 11.3 and 11.4 offer interesting information.

In 1830 the intervals in Russia (Malye Pupki) were rather large. The reasons given for this are the practise of breast feeding and also poorer working conditions. Both of these affect fertility. Moreover, infant mortality was rather low, which increases the negative effects of breast-feeding on fertility. In Groningen and in Brabant the intervals were also rather large, with the exception of the first which was considerably lower than in Russia. This had to do with premarital sexual intercourse; many children were born within a few month of marriage. In Russia customs did not admit this premarital sexual behaviour.

Table 11.3. Intervals between births of successive children. Cohort 1830 (months)

	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
Malye Pupki	28.9	40.6	34.5	36.9	45.7					
Groningen villages	15.1	26.3	28.9	35.5	27.8	31.2	32.2	32.5	30.5	43.6
Brabant villages		21.1	23.3	25.7	28.2	20.3	20.3	25.8		

Table 11.4. Intervals between births of successive children. Cohort 1870 (months)

	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
Malye Pupki.	30.7	35.0	29.5	31.4	30.4					
Groningen villages	13.5	26.4	25.1	28.8	27.4	30.0	28.6	45.5	29.7	29.1
Brabant villages		17.7	21.1	20.3	21.3	27.7	21.6	21.4		

When we compare the outcomes for the 1830 cohort with the cohort of 1870, the Dutch figures provide very interesting information. The intervals between the first four children in the Groningen villages are rather low. One reason may be the higher fertility because of the fall of the age of marriage, but we think that a kind of modern family limitation is revealed here. People had the number of children they wanted very quickly, and then they started practising birth control. But since their methods were as yet not very effective, a lot of 'accidents' occurred. As a result the intervals in the middle are rather high. After that the intervals become shorter again. When we take into account other characteristics of the cohort members who were still procreating at that time, we see that they almost all belonged to orthodox protestant religious groups. These people were not allowed to practice birth control and did not accept it.

In Brabant the pattern was quite different. There we also see large intervals in the middle which could be an indication of birth control. But on average the intervals are rather short. This had to do with the catholic religion which was dominant in that region. The roman catholic priests encouraged large families to promote catholic emancipation. The exception of the Brabant villages is accentuated by table 11.5.

Table 11.5. Average number of children per marriage

	1811	1830	1850	1870
Malye Pupki	1-3	4-6	4-6	4-6
Yaroslavl villages	3	4-6	4-6	4-6
Groningen villages	4.6	5.1	5.6	4.1
Brabant villages	5.8	6.2	5.7	6.6

The third important characteristic of tables 11.3 and 11.4 at is the fall in the intervals in Malye Pupki. Here again the trends are converging especially when we take into account that the Groningen pattern more strictly resembles the general Western European one.

D. Structure and size of families

Cohort analysis only gives information on successive generations. To obtain a more general picture structure analysis is a better instrument. To obtain a picture of the average size and structure of families, we made cross sections of the population in benchmark years based on the registers of population and confession and revisor's books. This enabled us, among other things, to discern different kinds of household. In total we had 12 different types of families (such as couples without children, parents with children, single-parent families, brothers or sisters living together, three generation families and so on). In table 11.6 we clustered nuclear families and extended families. The ideal/typical nuclear family consists of a father and mother and some children. The ideal extended family spans several generations.

Table 11.6. Structure of the families

	1850		1910	
	nuclear	extended	nuclear	extended
Hoogkerk	59.0	41.0	79.0	21.0
Yaroslavl villages	52.7	47.3		

According to Hajnal and others, the extended family was common in the East, whereas the nuclear family was common in industrial Western Europe. But here again convergence is shown. In 1850 already, the nuclear families in the villages we studied outnumbered the extended families.

First conclusions

Of course our observation are still based on the situation in a few villages. Further research is needed and will be done[6], but a initial comparison on the micro level indicates that in the second half of the 19th century and at the beginning of the 20th, demographic behaviour in Russia and the Netherlands may have had more similarities than has yet been presumed. Infant mortality, the age of marriage, procreation, and the structure and size of families all show converging trends. By the end of the 19th century the differences in demographic behaviour between the sets of villages in the East and the West seems to have been not much larger than the relative differences between the villages in Russia as well as in the Netherlands.

[6] Fortunately the Dutch organisation for scientific research (NWO) will finance continuation of our cooperation for the period 1997-2000.

12

How the Netherlands got a green heart and lost it again.[1]

The Green Heart in travel accounts

In 1848 the Groningen farmer Jan Freerks Zijlker was elected to the Dutch House of Representatives. During his first year in the House he kept a diary which was later published.[2] In this diary he also describes the weekend trips he took. On most occasions he had to remain in the west of the country because there was no train connection with the north and the other means of transport were very slow. As a farmer he paid special attention to the countryside. We do not have many accounts of the Dutch countryside because most descriptions of the countryside were made by travellers from Holland visiting other provinces, while people from abroad confined themselves to the towns.

Zijlker, for instance, travelled by train from the Hague to Rotterdam. He was not very impressed by the landscape, which he considered very poor in comparison to Groningen's clayey fields.[3] Other travellers were of the same opinion. The Rotterdam vicar J. Craandijk, who at the end of the 19th century crisscrossed the whole country and wrote many books about his travels, defined the area around Gouda as a boring landscape, set too low and with strange, rather untidy pasture.[4] However, in the 20th century this area was to become an icon of the Dutch landscape, the famous Green Heart, which was to be preserved immaculately forever.

Zijlker and Craandijk preferred the rural estates in the dunes and along the River Vecht, which were founded from the 17th century on by rich merchants from Amsterdam. Nevertheless, they expressed different opinions on nature.
Zijlker's vision was utilitarian. Nature was created for mankind to cultivate. The vision of Craandijk was arcadian-paradisiacal. He preferred man-made landscapes in which nature was reduced to civilised proportions in harmony with the built environment – ponds as metaphors for lakes, groups of trees as metaphors for forests and hills suggesting mountains. This vision made no sharp distinction between culture and nature.[5]

At the end of the century, however, culture and nature were set against each other. The industrialisation of the Netherlands was in full swing, agriculture was

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[1] A Dutch version of this article is published in *BMGN The Low Countries Historical Review* (2006) 753-771.
[2] 'Het dagboek van Jan Freerks Zijlker, met inleiding door dr. W.J. Formsma', *Groningse Volksalmanak voor het jaar 1948*, 81-221.
[3] 'Dagboek Jan Freerks Zijlker', 127.
[4] J. Craandijk, *Wandelingen door Nederland* (Third edition, Zuid Holland) (Haarlem 1888) 2.
[5] These kinds of visions of nature are explained in Pim Kooij, *Mythen van de groene ruimte* (Wageningen 1999).

First issue of *'De levende natuur'* (collection author)

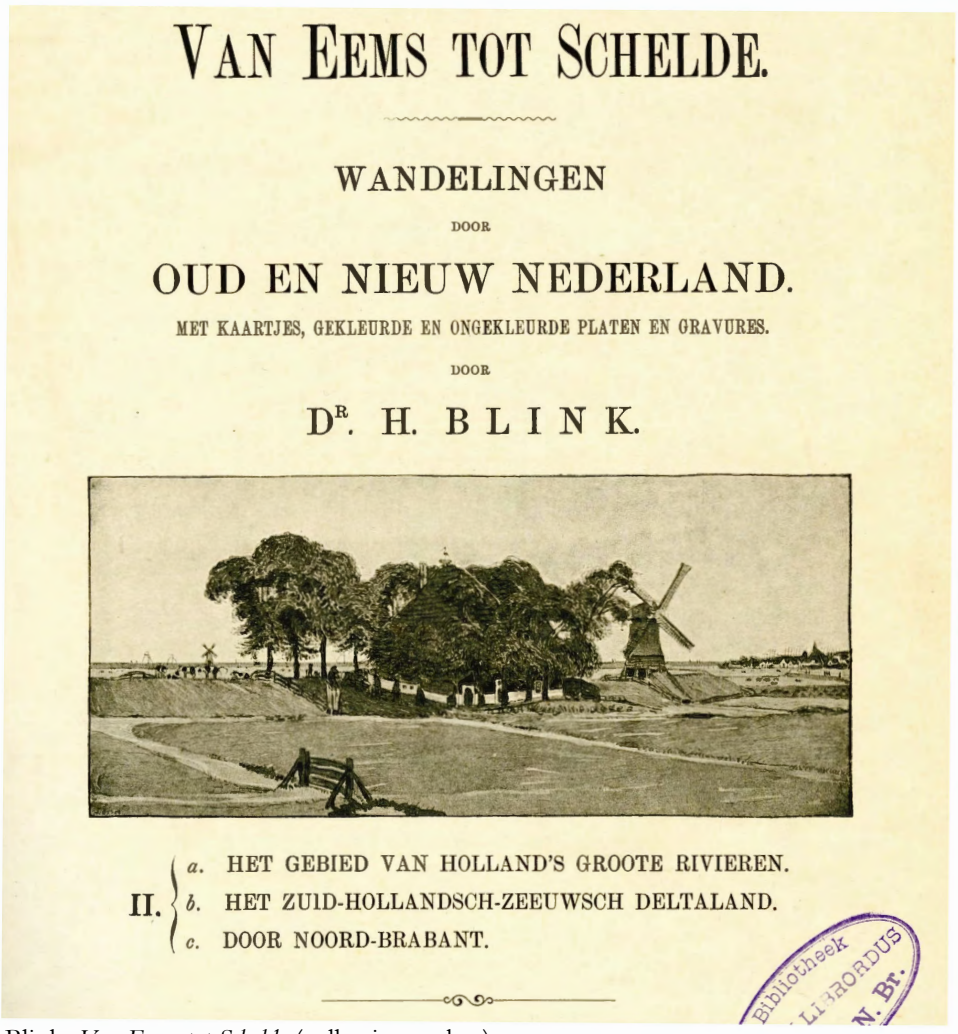
booming and required new areas, railways crossed the countryside and the defortification of towns created opportunities for the rapid extension of these towns. Growing numbers of people feared that what was left of nature would disappear completely and founded organisations for the protection of nature, plants and animals.

Along with this nature preservation movement, a third vision of nature was formed, one which I will term nature-emphatic. People were no longer content with dried plants and stuffed animals but wanted to experience living nature. They wanted to become acquainted with nature by moving into it. Journals such as De Levende Natuur (the living nature) edited by the teachers Eli Heimans and Jac. P. Thijsse acted as guides.

This preoccupation with living nature drew attention away from the appreciation of man-made landscapes, although not completely. The first purchases of the Dutch National Trust (Vereeniging tot Behoud van Natuurmonumenten) for the greater part consisted of country estates whose appearance was more or less natural. However, people sharing the nature-emphatic vision did not have much appreciation for the later Green Heart. They preferred the more natural areas in the east of the country, the dunes and the larger rivers. The titles of the famous Verkade albums, which for the greater part were written by Thijsse, reflect this. These were albums published by the Verkade factory – producers of chocolate, biscuits etc. – who provided illustrations for the albums packed along with their products. In 1911 Thijsse wrote the album De bonte wei (the colourful meadow), which hardly contained any observations on the polders of the later Green Heart. He collected his examples from elsewhere. Nonetheless, there is an album by Thijsse on the River Vecht – which is located in this area – and

one of his last albums, Waar wij wonen (where we live), from 1937 has an enormous cloudy sky on its cover, an image which was later exclusively associated with the Green Heart.

Therefore, this new nature-emphatic approach initially inspired no particular appreciation for the Green Heart, a negativity shared by Dutch travellers with an arcadian vision in the early twentieth century. The geographer H. Blink, who wrote the four volume Van Eems tot Schelde (from Eems to Scheldt) is their most outspoken representative.[6] He especially disliked the Rhine, which is redu-


VAN EEMS TOT SCHELDE.

WANDELINGEN

DOOR

OUD EN NIEUW NEDERLAND.

MET KAARTJES, GEKLEURDE EN ONGEKLEURDE PLATEN EN GRAVURES.

DOOR

D^R. H. BLINK.

II. a. HET GEBIED VAN HOLLAND'S GROOTE RIVIEREN.
b. HET ZUID-HOLLANDSCH-ZEEUWSCH DELTALAND.
c. DOOR NOORD-BRABANT.

Blink, *Van Eems tot Schelde* (collection author)

[6] H. Blink, *Van Eems tot Schelde. Wandelingen door oud en nieuw Nederland*. 4 volumes (Amsterdam, 1902-1906).

ced from a majestic river to a ditch, and the monotonous polders.[7] Even in 1941, F. Koster in his book Ons schoone land (our beautiful country) does not spare much attention for the polder landscape.

The appreciation of the man-made landscape

We can conclude that appreciation for the central green polder landscape which comprises parts of the provinces of North and South Holland and Utrecht, was fairly limited until well into the 20th century. This leads us to ask what the popular landscapes actually were, and how and why this depreciation of the polder landscape disappeared?

It is useful to review accounts made by foreigners when determining which landscapes were popular, because they made their observations from a greater distance. The famous Italian globetrotter Edmondo de Amicis, who travelled in the Netherlands in 1873–74, was very explicit. The urban forest of the Hague was the top.[8] Polders in his view were characteristic but monotonous. Another well-known foreign traveller, Henry Havard of France, who regularly visited the Netherlands at about the same period, especially liked the towns and the water – the larger rivers and the Zuider Zee. He often travelled by boat.[9]

The waterfront was also Blink's favourite: 'Do not visit the Drachenfels, Schwarzwald or Schaffhausen, before you have seen the rivers of Holland'.[10] He and other writers also liked ponds and lakes, with the Naardermeer rated first among them, the first purchase made by Natuurmonumenten. There was also admiration expressed for dunes and woods. It is quite clear that Moorland was not much appreciated. There was also a general appreciation of southern Limburg, which was considered rather exotic.

Henny van der Windt describes how the boundaries of the major natural areas in the Netherlands started to be fixed around 1930.[11] This was carried out by a commission consisting of representatives of a number of organisations in the fields of nature conservation and recreation. In 1939 this commission published a report which assigned more than 700 areas.[12] Additionally, a small number of regions were designated for complete conservation: South Limburg, the Veluwe, the Achterhoek parts of the provinces of Overijssel and Friesland, the Dunes and the Lakes of Holland. Only the Lakes of Holland were situated in the later Green Heart. About half of the areas specified in the list were purchased by the government.

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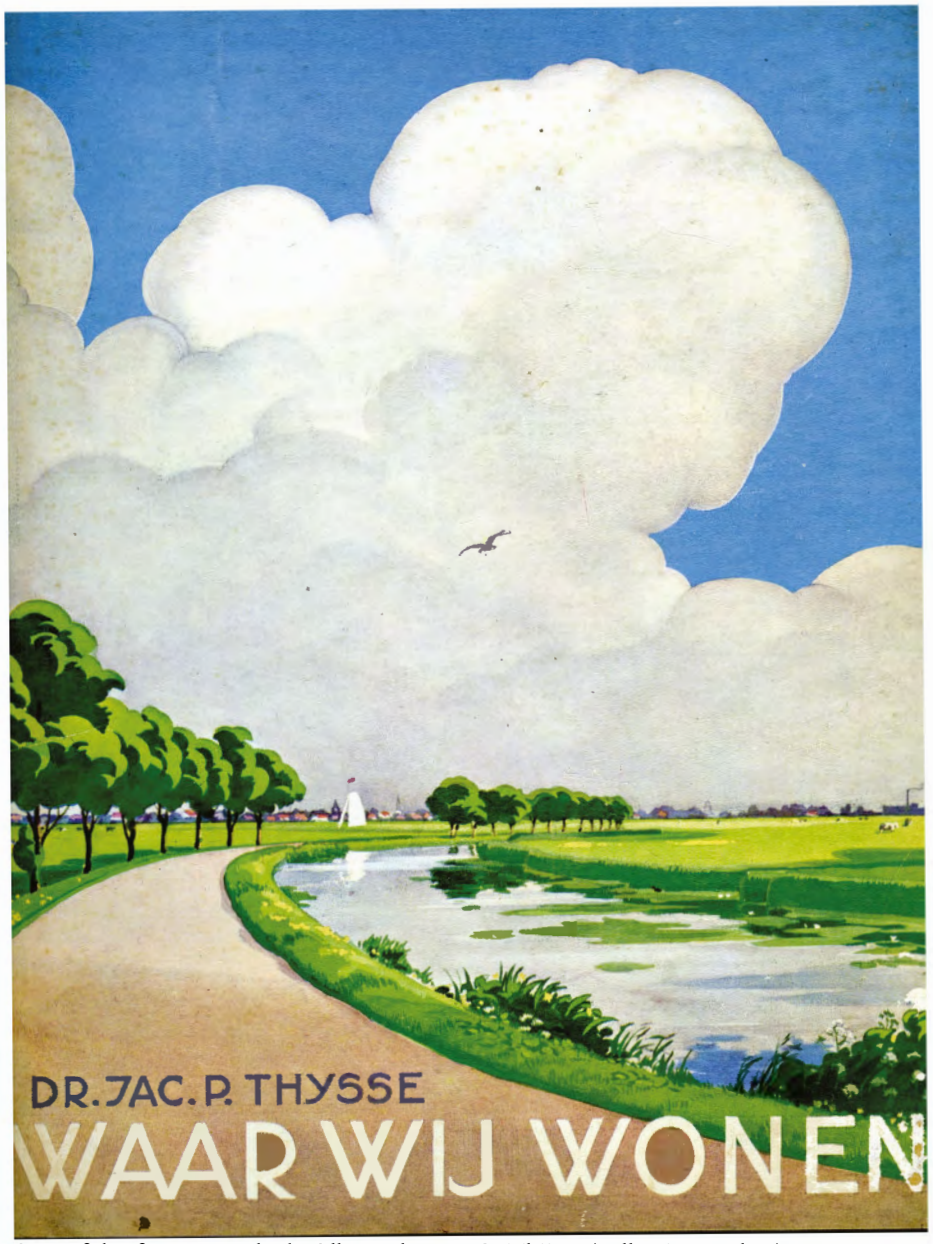
[7] Blink, *Van Eems tot Schelde*, vol. I 173-182, vol. II 45.
[8] Edmondo de Amicis, *Nederland en zijn bewoners* (First edition 1876, this edition Utrecht/Antwerpen, 1985) 94.
[9] H. Havard, *La Hollande pittoresque: voyage aux villes mortes du Zuiderzée* (Paris, 1874).
[10] Blink, *Van Eems tot Schelde*, vol. 2, 145.
[11] Henny van der Windt, *En dan: wat is natuur nog in dit land? Natuurbescherming in Nederland 1880-1990* (Amsterdam/Meppel, 1995) Chapter 4.
[12] G.A. Brouwer, H. Cleyndert, W.G. v.d. Kloot, J.P. Thijsse and T. Weevers, *Het voornaamste natuurschoon in Nederland* (1939).

Man-made landscapes in the sense of areas destined for agrarian production were almost absent. There were, however, some members of the commission, especially the biologist H. Cleyndert, who wondered if some cultivated land-



One of the famous Verkade Albums by Jac. P. Thijsse (collection author)

landscapes did not possess some natural value. To discuss this problem, the 'cultivated landscapes' discussion group was founded in 1943. Cleyndert had the chair and one of its members was the biologist/ecologist Victor Westhoff, who was to become an authority in this field. After the war this group published a list of landscapes which needed protection. The list contained sixty-three areas, most of them located around villages in the east of the country. The main criterion for inclusion in the list was the extent to which these landscapes were endangered. Since there was no threat to the polder landscapes, they were absent from the list. However, we may speculate whether they would have been included if this had been the case.[13]

After 1950 a new perspective on man-made landscapes was developed. The Land Consolidation Act of 1954 stimulated the renovation of large parts of the Netherlands. Initially, absolute priority was given to agriculture to achieve food security.[14] Organisations in the fields of recreation and nature protection were forced into a defensive position. Perhaps this resulted in the formation of less rigid opinions on the boundary between nature and culture in nature-emphatic people. Man-made landscapes, which were now under threat, also deserved protection.[15] It was admitted that there were no purely natural landscapes left in the Netherlands, every area being subjected to human influence. There was only a differentiation in the intensity of cultivation. In this context the term natural value gained relevance, especially in the 1970s. This category combined scientific elements such as authenticity, diversity and rarity, with attention for recreation and non-professional perceptions of nature and landscape. This softened the boundary between nature and culture.[16]

The invention of the Randstad

The debate on the primacy of agriculture and the relationship between nature and culture proved an impetus for the definition of the Green Heart as the iconic Dutch landscape. However, before I begin formulating an answer to the second question on the popularity of the polders and the Green Heart set out above, I have to introduce the Dutch Randstad because the Green Heart started as the heart of the Randstad, later to become the heart of the Netherlands as a whole.

The term Randstad was probably used for the first time around 1930 by aviation pioneer and first director of KLM Royal Dutch Airlines, Albert Plesman.[17] From the air he noticed a semicircle of towns in green surroundings. Some

[13] Van der Windt, *En dan: wat is natuur*, 120.
[14] G. Andela, *Kneedbaar landschap, kneedbaar volk. De heroïsche jaren van de ruilverkaveling in Nederland* (Bussum, 2000); Simon van den Bergh, *Verdeeld land. De geschiedenis van de ruilverkaveling in Nederland vanuit een lokaal perspectief, 1890-1985* (Groningen/Wageningen 2004).
[15] H. Cleyndert, 'de zorg voor het landschap', in H. Gorter et al., *Een halve eeuw natuurbescherming* (Amsterdam 1956) 101-109.
[16] See also Kris van Koppen, *Echte natuur. Een sociaaltheoretisch onderzoek naar natuurwaardering en natuurbescherming in de moderne samenleving* (Wageningen 2002).
[17] Sako Musterd and Ben de Pater, *Randstad Holland. Internationaal, regionaal, lokaal* (Assen 1994) 1.

imagination was required to discern this circle at that time because in spite of defortification and suburbanisation, the towns were still clearly separated from each other. The greater part of the green spaces between the towns, which were described by Zijlker almost a century ago, were still intact. Plesman, however, had his reasons for speaking of one integrated city because he wanted one national airport instead of the local airports of Amsterdam, the Hague and Rotterdam. The first mention of the term Randstad on paper is in a letter from KLM to the Ministry of the Interior in 1938.

Since that time there has been an ongoing debate on the existence, character and integration level of the Randstad. Most of the participants are geographers and planners. There are also some contributors who apply a historical perspective. In their article 'The rise of the Randstad', the geographer R. van Engelsdorp Gastelaars and the historian M. Wagenaar argue that in the 19th and early 20th centuries Amsterdam, Rotterdam and the Hague displayed substantial complementarities, which would enable the formation of one integrated city.[18] At that time the colonial trade was concentrated in Amsterdam, while Rotterdam was the centre for trade with Germany along the Rhine. The Hague was the political centre of the Netherlands. The banking and insurance sectors enjoyed complementary amenities and the same was the case for industrial plants.

Development, however, took the opposite direction. Kooij and Van de Laar discovered that after 1930 this complementary state increasingly turned into competition as the urban administrators in each city promoted the same activities and stimulated the development of the same functions. Although the Randstad seen from the air appears to have developed into a real integrated circle, with Utrecht in the east closing the gap, there is in fact administrative separation and competition in the economic, social and cultural domains.[19] Perhaps the Randstad should be described as a bipolar agglomeration. On the one hand is the Amsterdam–Utrecht axis, including Schiphol airport, which excels in modern services. This makes this axis perform much better than the Rotterdam–the Hague one, which continues to support the significant path-dependency of bulk transport over water.

Some scholars, however, contest this bipolar model and speak of polynodality because in the cultural domain there is a long tradition of stressing the individual character and even the identity of the four great cities and at least six smaller ones.

The invention of the Green Heart

These changes in the perception of the Randstad must have had consequences on the perception of the Green Heart. It could be expected that periods

[18] R. van Engelsdorp Gastelaars and M. Wagenaar, 'The rise of the Randstad 1815-1930', in H. Schmal (ed.) *Patterns of European Urbanisation since 1500* (London 1981) 229-247.

[19] Pim Kooij & Paul van de Laar, 'The Randstad conurbation: a floating metropolis in the Dutch Delta, in Henk van Dijk, (ed.) *The European metropolis 1920-2000* (Internet publication, 2002: http://hdl.handle.net/1765/1028). See also this volume.

– and studies – where the Randstad is viewed as an integrated agglomeration will take a similar approach to the Green Heart, while the differentiation of the Randstad will result in a diversification of the Green Heart. The same is the case for the level at which planning takes place – an integrated vision implies planning at the national level, while diversification leads to planning at a provincial or local scale. In any case, history has made it clear that the Randstad has been primarily a construction of politicians and planners with no independent existence of its own.

The same is probably the case for the Green Heart. The term was coined in 1958 in a number of reports, starting with *Ontwikkeling in het westen des lands* (development in the west of the country).[20] The boundaries of the Green Heart were defined for the first time in 1990 in the *Vierde Nota over de Ruimtelijke Ordening Extra (Vinex)* (fourth report on town and country planning) on page 37, and elaborated on in *Structuurschema Groene Ruimte* from 1992 (PKB map 6, 205). Four subareas can be discerned in the Green Heart:

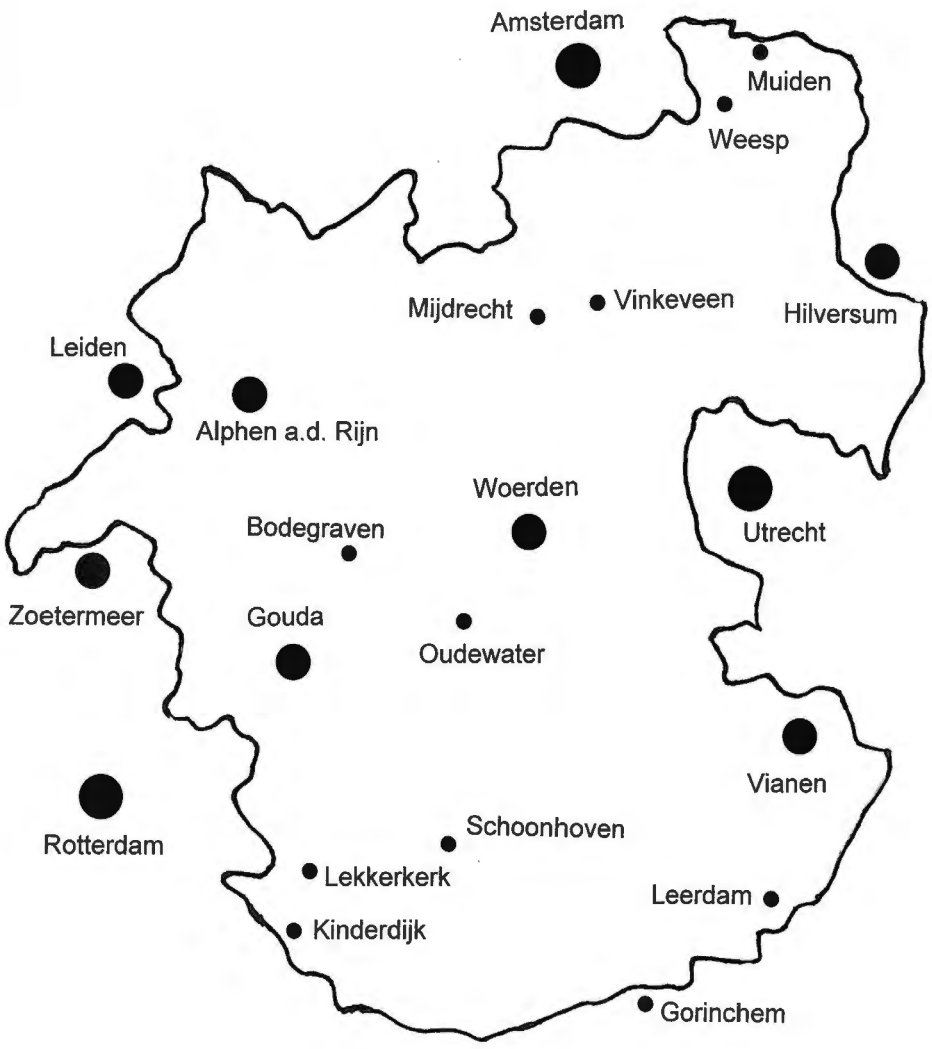
- the banks of the Old Rhine (Oude Rijn) including the towns Gouda, Woerden, Bodegraven and Alphen aan den Rijn.
- polders and lakes which are the result of peat digging – the area between Zoetermeer, Waddinxveen and the area south of Amsterdam centred around Mijdrecht, including the southern part of Haarlemmermeer.
- the polders Krimpenerwaard and Alblasserwaard.
- the area around the River Vecht, bordered by Amsterdam, Utrecht, Hilversum and Bussum.[21]

It is remarkable that the Rhine/Lek is the only river situated in the Green Heart, the Meuse and Waal being located outside this area. The greater part of the Green Heart is the result of peat digging, which started in the eleventh century. The Count of Holland and the Bishop of Utrecht were important initiators of this reclamation. An extended web of ditches and watercourses provided for the rapid discharge of water, which made the soil suitable for agriculture. Drops in the land levels regularly caused new flooding, but the use of windmills and the creation of polders provided drainage. The peat was transported to the urban markets. Peat began to be excavated from below the water level from 1530 on. This resulted in the development of large lakes. Many of these lakes were reclaimed in the 19th and 20th centuries, while others remained untouched, only to suddenly come to be considered as important areas for recreation in the 20th century.

Agriculture for the greater part implied mixed farming. Flax, hemp and oilseed were produced in addition to livestock. In the early 20th century, however, there was a switch to livestock farming. This was caused by the increasing de-

[20] Werkcommissie Westen des Lands van de Rijksdienst voor het Nationale Plan, *Ontwikkeling van het westen des lands* (The Hague 1958).
[21] Guus Borger, Adriaan Haartsen, Paul Vesters, in collaboration with Frits Horsten, *Het Groene hart. Een Hollands cultuurlandschap* (Utrecht 1997).

mand for dairy products from the fast growing cities. The landscape thus became one of meadows, which in fact meant that around 1900 all the ingredients which in contemporary perceptions are characteristic of a beautiful polder landscape were present – dikes, water, windmills and meadows with cows. However, as previously noted, this landscape was not very popular around 1900. How did this change?



Size of the Green Heart

I mentioned above that the appreciation for a man-made landscape slowly grew over time. However, this does not prove how the Green Heart could become the icon of the Dutch man-made landscapes. Perhaps it never had this position? The debate on the Green Heart in many ways resembles that on the Randstad, but there has been less research on the Green Heart so far. There are, however, some exceptions. Between 1960 and 1970 geographers from Utrecht University performed large-scale research in the central area of the Green Heart, which yielded a number of reports.[22] These reports, however, focus on housing, working, suburbanisation and commuting. There has been no systematic research into the perception of green elements by the inhabitants. This element was only developed in a propagandist tourist guide by Barendse and Terlouw from 1977, in which rest and space within the Green Heart were mentioned as positive characteristics.[23]

The first research centred systematically on the green function of the Green Heart dates from 1983. It was performed by the Dutch National Planning Bureau and was not very positive. Only the lakes had high value.[24] In the interviews the inhabitants noted the openness of the landscape in contrast to the built environment and the presence of water as positive elements.[25] An interesting point was that only thirty-four percent of the respondents considered the area an integrated area ex ante, while fifty-eight percent did so ex post. In the meantime they had been confronted with propaganda from organisations for the protection of nature and the environment.

Politics gave shape to the Green Heart through many reports, such as the report on the relationship between agriculture and nature, the so-called *Relatienota* (1975), and the *Natuurbeleidsplan* (1990), which elaborates an ecological structure covering the whole country and links individual nature reserves.[26] The organisations for the protection of nature and the environment formulated arguments for the debates. In these debates the Green Heart increasingly became a catalyst in the decision-making process. It became the arena in which all the stakeholder interests were concentrated and where the conflicts between these different interests had to be resolved.

Around 1990 the green approach got the support of a majority of politicians. The extensions of towns and cities in the Green Heart was ordered to be stopped completely and immediately. Specific reports on the Green Heart such as *Groene Hart* in 1990 and *Randstad en Groene Hart: de groene wereldstad* (green metropolis) of 1996 were distilled from general ones.[27] Both reports stressed the

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[22] Henk F.L. Ottens, *Het groene hart binnen de Randstad. Een beeld van de suburbanisatie in west-Nederland* (Assen/Amsterdam 1976).
[23] Gerard Barendse and Piet Terlouw, *Het groene hart van Nederland* (The Hague 1977)
[24] Staats, *Betekenis Groene Hart*, 26.
[25] Staats, *Betekenis Groene Hart*, 64 and 70.
[26] A good evaluation of these reports is provided by Marijke van Schendelen, *Natuur en ruimtelijke orde in Nederland. Een symbiotische relatie* (Rotterdam, 1997)
[27] Stuurgroep Groene Hart, *Groene Hart. Nadere uitwerking in het kader van de vierde nota over de ruimtelijke orde-*

need for a firm fixed border between the built and the green environment, between the red and the green. Harmony between different functions was also argued for, such as between agriculture and recreation but also between housing and working, for which 'soft locations' were defined. This approach is characteristic of the economic escape mechanism almost every report contains.

The upgrading of the Green Heart

In the reports the natural qualities of the green area are mostly defined as ecological values, based on biodiversity. However, this is usually not very explicit.[28] The organisations for the protection of nature and environment are not explicit either. They confine themselves to some form of experience values, such as those put forward in the book *Gras en wolken* (grass and clouds) by G. Willems, K. van Zomeren and H. Vuijsje, published in 1996. This book evokes a polder landscape with high skies, grassy meadows, clear watercourses and cows who still have their horns and are milked by hand.[29] Another publication of this kind is *Dwars door het groene hart: landschapsverkenningen door tijd en ruimte*, which shows through beautiful photographs an extra dimension in the threat to this idyllic situation by the built environment.[30] In the magazine *Groene Hart Visie*, published by the Foundation for the Green Heart, the positive aspects of the area are stressed in every issue.

We now know that this conceptualisation is recent. Previously, the need for protection of the area's potential for recreation was put forward many times. The Dutch national organization for tourism, ANWB, published a booklet *Hollands Groene Zone* in 1961 which stated that the existing recreational zones – the dunes, the beaches, the rivers, the moors, the lakes and ponds – were not sufficient to entertain a fast growing population. New areas were needed which could be found in unattractive agricultural areas in the Green Heart. This report very naively presupposed the symbiosis of agriculture and recreation. A report was published thirty-four years later in 1995 by the same organization along with the WWF-World Wide Fund For Nature, containing much grander claims.[31] It stated that agriculture remained important but was not capable of creating an attractive landscape.[32] This was primarily caused by the rise in the intensification of agriculture, the greenhouse culture and the production of bulbs.

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ning (The Hague 1990); Ministerie van VROM, *Randstad en Groene Hart. De groene wereldstad* (The Hague 1996).

[28] A scientific stocktaking of the historical diversity of the Dutch landscape does not pay much attention to the Green Heart: S. Barends et al., *Het Nederlandse Landschap. Een historisch-geografische benadering* (Utrecht, 1986).

[29] Gerrit Willems, Koos van Zomeren and Herman Vuijsje, *Gras en wolken. Een beeld van het Groene Hart* (Zwolle/Woerden 1996). This publication was linked to an exhibition of paintings concerning the Green Heart.

[30] F. Buissink, T. Fey, M. Bemelman, *Dwars door het groene hart: landschapsverkenningen door tijd en ruimte* (Abcoude, 2001).

[31] ANWB and WWF, *Groen Hart? Groene metropool. Recreatie en natuur in de Randstad van morgen* (Utrecht 1995).

[32] *Groen Hart, Groene metropool*, 7.

The ANWB and the WWF calculated that about 60,000 hectares of new nature were needed. This could be effected by the development of more or less natural elements within the Green Heart. The creation of a green metropolis was also discussed, which in fact implied the negation of Green Heart as an integrated construct, but very soon this idea was dropped.

Since 1990 increasing attention has been paid to elements in the cultural sphere, which implied the introduction of cultural values into research, in addition to natural values. This was elaborated through the combination of three sciences – archeology, historical geography and building history as a specialization in the history of art. They focus on artefacts in the landscape which refer to human activities in the past. The landscape itself, which was also man-made, was also taken into account.[33] The historical geographers defined eleven types of landscape. The greater part of the Green Heart was indicated as peat reclamation landscape, which could also be found in other parts of the Netherlands. This was not considered as the most valuable kind of landscape and was placed in the middle of the scale.[34]

In 1996 Borger and Vesters designed an evaluation map especially for the Green Heart in which more and less valuable areas are distinguished. Soundness, rarity and characteristicy were the main criteria for this evaluation of the man-made landscape. Characteristic elements such as mills, old factories, farms, old roads and sluices were also incorporated.

The highest values were given to the central part of the Alblasserwaard polder, the western part of the area around the River Linge, the ponds and polders north of Woerden, the Hoogmade polder east of Leiden, and the River Vecht and the Loosdrecht lakes. The lowest values were attached to the area around Zoetermeer, consisting of cleared land, and south of the Haarlemmermeer polder in which Schiphol airport is situated. Almost every part of the fringes of the Green Heart got a low score, with the exception of the Diefdijk north of Leerdam, which is part of the Dutch Waterlinie, an old defence system based on inundation. Values for nature are also incorporated into the map. The rise of biodiversity, for instance, was a consequence of peat reclamation.[35]

The introduction of values for natural and cultural elements has increased the appreciation of the landscape of the Green Heart. At the same time, however, they pointed at the heterogeneity of the area. This was negated by the political reports of the 1990s. Policymakers, especially in the Ministry of Planning, were

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[33] Borger el al., *Groene Hart*, 7; *Nota Belvedère. Beleidsnota over de relatie cultuurhistorie en ruimtelijke inrichting* (The Hague 1999). See for the relationship between this approach and that of historical science M.A.W. Gerding, (ed.), *Belvedère en de geschiedenis van de groene ruimte* (Groningen/Wageningen 2003). The relationship with geography is discussed by Guus Borger, 'Het verleden als kwaliteit van de toekomst. Pleidooi voor een nieuwe benadering', in Cees Cortie, Joos Droogleever Fortuijn, Michiel Wagenaar, (eds.), *Stad en land. Over bewoners en woonmilieus. Opstellen aangeboden aan Rob van Engelsdorp Gastelaars bij zijn afscheid als hoogleraar sociale geografie aan de Universiteit van Amsterdam* (Amsterdam 2003) 110-122.

[34] A.J. Haartsen, A.P. de Klerk, J.A.J. Vervloet, in collaboration with G.J. Borger, *Levend verleden. Een verkenning van de cultuurhistorische betekenis van het Nederlandse landschap* (The Hague 1989)

[35] Borger et al., *Groene Hart*, 49.

eager to present the area as a unity and wanted it to turn into one big national park. The report *Ontwikkelingsprogramma nationaal landschap Groene Hart*, published in 1999, is a highlight in this propaganda of uniformity, which reached its zenith under Minister of Planning Jan Pronk.[36] The Green Heart was launched as a national landscape which had to remain untouched forever.[37] The report reveals an idyllic future in which agriculture, nature, recreation and culture are in harmony and reinforce each other. The ecological superstructure is also incorporated and development in the fringe areas has stopped completely. This political intention was repeated the *Vijfde Nota Ruimtelijke Ordening* (Fifth Report on Town and Country Planning) (2002).

This policy has had positive effects on the appreciation of the Green Heart in public opinion and by the organisations involved. In 2005 De Raad voor het Landelijk Gebied (The Council for Rural Areas) which advised the government, placed the Green Heart along with eight other areas in the premier league of national landscapes because of its rarity and importance to the national identity.[38]

The pulverisation of the Green Heart

In the meantime, however, the tide had turned again. Since 2002, successive cabinets under Prime Minister Balkenende, consisting of Christian and liberal politicians, advocated less central planning and more room for the market. This new approach was elaborated in the *Nota Ruimte* report (Spatial policy report) by the liberal Minister of Planning Sybilla Dekker. The provinces and municipalities were given more competences in spatial affairs and the strict prohibition on building in the Green Heart disappeared. A report by the Ruimtelijk Planbureau (Netherlands Institute for Spatial Research) *Het gedeelde land van de Randstad. Ontwikkeling en toekomst van het Groene Hart* (the Future of the Green Heart), which was published soon afterwards, shows clearly what this could imply for the area.[39] This report suggests that the constant extension of living and working could continue in the future. There will be space for many more people. The unity of the Green Heart is denied. A distinction is drawn between urban landscapes – which derive their meaning from their nearness to the city – recreational landscapes such as lakes and natural areas, and man-made landscapes such as characteristic agricultural areas. Each of these varieties requires special management and planning, in which not only nature and culture are points of special interest, but also the economy and room for housing.[40]

This meant a complete u-turn.[41] Although the Netherlands Institute for Spa-

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[36] Ministerie van VROM, *Groene Hart. Ontwikkelingsprogramma nationaal landschap Groene Hart* (The Hague 1999).
[37] *Groene Hart. Ontwikkelingsprogramma*, 7
[38] Raad Landelijk Gebied, *Nationale landschappen: vaste koers en lange adem* (Amersfoort, 2005)
[39] Nico Pieterse et al., *Het gedeelde land van de randstad. Ontwikkeling en toekomst van het Groene Hart* (The Hague 2005)
[40] Pieterse, *Gedeelde land*, 140.
[41] Hugo Priemus, 'Spatial memorandum 2004: a turning point in the Netherlands' spatial development policy',

tial Research is not as important as the Netherlands Bureau for Economic Policy Analysis, these recommendations will be grist to the mill of those who want to give space to traffic, living and working instead of fostering the Green Heart as a national park.[42] It is remarkable that this picture of a unique Green Heart could so easily become fragmented. It makes clear that, as has been put forward above, the appreciation for this area does not have deep roots in history.

Conclusion

The Green Heart as the ultimate symbol of the beauty of the Dutch polder landscape only existed for ten years. Around 1960 planners and politicians started the construction of this picture. Around 1990 it was complete and more or less generally accepted. Nevertheless, this picture was only sharp from a distance, because within the green area its diversity never completely disappeared from the minds of the people, while the adaptation of the fringes for dwelling and working also continued. Since 2005, this emphasis on diversity and room for economic activities has been growing again. This reduces the Green Heart to what it had been before 1960 – the hinterland of a number of individual cities and towns, each of which has its own plans for cultivation.

Tijdschrift voor Economische en Sociale Geografie 95 (2004) 578–583.

[42] H. van der Cammen, *Groeien in het Groene Hart. Een ruimtelijk-economische toekomstvisie op Midden-Holland* (Hilversum, 1991). NYFER, *Het Groene Hart, dat klopt niet* (The Hague 1996).

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The evolution of the countryside over time.[1]

The countryside as a development area

As soon as the first people settled in what is now the Netherlands, the restructuring of the countryside began. The farmers - at that time almost everyone was a farmer - took the lead.[2] Little by little they cultivated the land and they created a surplus which permitted the founding of villages and towns, where people with other occupations settled.

This process of cultivation has never been easy. It was not easy to keep the land dry, particularly in the densely populated alluvial part of the country. The construction of dikes was an important instrument for the prevention of floods. Accordingly, the polder model was invented in the eleventh century, along with its corresponding organisational model (the district water boards) and the associated wind technology. With the help of this technology, peat digging became possible. This process transformed the fenland in the west and north of the Netherlands into lakes and pasture, while moorland was turned into arable land. Peat was also already excavated from some higher parts of the Netherlands.[3] However, most cultivation activities there consisted of getting the moorland under plough.[4]

This transformation was inspired by the *utilitarian* view that the land was there for people to use as they liked. In fact, areas only belonged to the countryside when they were cultivated. There was no appreciation for wasteland, which was viewed as land that had to be cultivated as soon as possible.

With the help of the new technology which had become available during the industrialisation process, an offensive began in the late nineteenth and early twentieth centuries to clear the last wasteland, which around 1900 covered about twenty percent of the surface of the Netherlands. This technology was primarily used for drainage and deep ploughing. The actual clearing was done by manual labour, for the greater part in the context of unemployment relief projects. Dur-

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[1] A Dutch version of this article 'Plattelandsontwikkeling. De lange termijn' was published in W. Asbeeck Brusse, J. Bouma, R. Griffiths (eds.) *De toekomst van het gemeenschappelijk landbouwbeleid: actuele vraagstukken en perspectieven voor Nederland* (Lemma: Utrecht 2002). This article combines some insights presented in Pim Kooij, *Mythen van de groene ruimte* (Wageningen 1999); Pim Kooij, 'Agrarische geschiedenis in de actualiteit', in Pim Kooij et al. *De actualiteit van de agrarische geschiedenis*. Historia Agriculturae 30 (Groningen/Wageningen 2000) 1-27; Pim Kooij, 'Van platteland naar groene ruimte' *Spil,* 177-178 (2001) 14-20.

[2] Sjef Hendrikx, *De ontginning van Nederland* (Utrecht 1998).

[3] M.A.W. Gerding, *Vier eeuwen turfwinning. De verveningen in Groningen, Friesland, Drenthe en Overijssel tussen 1550 en 1950, A.A.G. Bijdragen 35* (Wageningen 1995).

[4] P.H.M. Thissen, 'Van heide tot boerenland en bos', in Marty de Harde & Hans van Triest (eds.) *Jonge landschappen* (Utrecht 1994) 21-38.

ing this process the last collective administrations, the so-called 'marken' which still existed in the east and the south of the country, were replaced by individual property rights.[5]

Technological innovations also made operational management in agriculture uniform. In the arable farming areas artificial fertilisers brought an end to mixed farming, and in grassland areas, the rising demand from abroad combined with the possibility of mechanical milk processing resulted in the intensification of dairy farming. Mixed farming survived in sandy areas. Here, intensive farming, especially in the form of the stock rearing of pigs and confined poultry farming, became specialities.[6] The regional farming styles were replaced by uniform styles based on scientific recommendations and the imitation of successful farmers. Farms also became more uniform.

By around 1950, the cultivation of the Netherlands was more or less complete. An extension was now planned in the new polders in the IJsselmeer. These polders stood in stark contrast to some parts of the 'old land'. The greater part of the old land, however, was adapted to the new conditions through land consolidation, a process which had already been initiated in the early twentieth century but which was now being intensified.[7] This was accompanied by the state policy of Regional Development (Streekverbetering), a combination of advice and land consolidation intended to modernise the more undeveloped parts of the country.[8]

These developments illustrate that the countryside remained primarily utilitarian until around 1960. However, at the same time, voices expressing another vision of the countryside grew louder. These voices had an unmistakable urban accent.

The countryside as an urban backyard

Viewed from a cultural perspective, town and countryside can be considered as each other's opposites, with the modern city set in contrast to the backward countryside, and rural peace and quiet set against urban stress.[9] Seen from an economic perspective, however, town and countryside are each other's complements. If we go back in time, these complementarities become increasingly manifest.

As mentioned above, the first villages emerged thanks to an agricultural surplus. This surplus could feed the villagers, but it could also be traded. This im-

[5] Jan Bieleman, *Geschiedenis van de landbouw in Nederland 1500-1950* (Amsterdam/Meppel 1992) III

[6] Bieleman, *Geschiedenis landbouw*, III

[7] G. Andela, *Kneedbaar landschap, kneedbaar volk. De heroïsche jaren van de ruilverkaveling in Nederland* (Bussum 2000). Simon van den Bergh, *Verdeeld land. De geschiedenis van de ruilverkaveling in Nederland vanuit een lokaal perspectief, 1890-1985*. Historia Agriculturae 35 (Groningen/Wageningen 2004).

[8] Erwin H. Karel, *De maakbare boer. Streekverbetering als instrument van het Nederlandse landbouwbeleid 1953-1970*. Historia Agriculturae 37 (Groningen/Wageningen 2005).

[9] P. Kooij, 'Stad en platteland', in F.L. van Holthoon (ed.) *De Nederlandse samenleving sinds 1815* (Assen/Maastricht 1985) 93-119. A. Schuurman, 'Plattelandscultuur in de negentiende en vroeg-twintigste eeuw. Modernisering en globalisering. Een essay', in *Jaarboek Nederlands Openluchtmuseum* 5 (1999) 270-302.

plied the creation of markets, which initially were real places where supply and demand met and where additional activities - transport, wholesale - were concentrated. These activities became so multifarious in some villages that they turned into multifunctional centres, into towns. From around 1000 CE the specific character of these towns was accentuated by sovereigns through the granting of charters, which placed them outside the feudal system. The importance of their urban functions was stressed by the erection of walls.

Demand was exerted on the countryside by the towns' demand for rural products and for labour. This resulted in the intensification of the agriculture located around towns in the form of horticulture and dairy farming on small-scale lots of land. The demand for labour was translated into migration from the country into the towns. This movement remained constant because the death rate in the towns was far higher than in the countryside until the 19th century.[10]

In addition, in some regions the rural population had become involved in the urban production of goods as early as the Middle Ages. The putting-out system was introduced in Flanders, where some parts of the production process, like spinning and weaving, were performed by small-hold farmers and their relatives. This system also evolved in Twente and in central Brabant. It also implied the possibility of improving the profitability of small farms.

The development of the countryside in the sense of increased planning was directed from the town. This was not only the case for the urban fringe but also for remote areas. Peat digging, for instance, was organised from the towns. The demand from Amsterdam stimulated the process in the province of Groningen in the north. The town of Groningen took the lead in peat exploitation in this area, but urban companies were active elsewhere. Land was considered by urban dwellers as a profitable and stable investment. The farmer-tenants had to obey the rules of such absentee owners.

Towns people also started to live in the countryside. Many rich inhabitants from Amsterdam considered their city too crowded and dirty to live in permanently as early as the 17th century. At that time, Amsterdam had about 200,000 inhabitants. These 'refugees' settled along the rivers Vecht and Amstel, and in the dunes along the North Sea coast. Their country estates also appeared near the Hague and Middelburg, the capital of the province of Zeeland.

These owners of country estates had a different view of the countryside than the farmers. In a way, their vision was also utilitarian, in the sense that they also wanted to cultivate the land. However, they did not want to do so for the production of goods but for their own pleasure. They preferred a well cultivated landscape. Initially, they created formal gardens around their houses, following the French example. This implied an extra civilised contrast with the surrounding 'wilderness'.[11]

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[10] F.W.A. van Poppel, *Stad en platteland in demografisch perspectief. De Nederlandse situatie in de periode 1850-1960.* NIDI report (Voorburg, 1984).

[11] Hans Renes, 'Bossen en buitenplaatsen', in De Harde & Van Triest (eds.) *Jonge landschappen*, 38-51.

In the eighteenth and nineteenth centuries the English landscape style became popular, which implied a more park-like landscape with curving paths and the use of water features. In fact it was tamed nature – a hill as a metaphor for a mountain, a group of trees pretending to be a forest and a pond representing a lake. Furthermore, a pleasant fauna consisting of peacocks, swans and pigeons took the place of wild animals.

I would like to term the vision of these new dwellers in the countryside *arcadian-paradisaical*, because it contains ideas of a lost landscape. They did not seek to evoke a time when the earth was waste and idle, but a delightful, lost paradise, like the often depicted landscape of Greek Arcadia, where the people had a grand old time in the company of various mythological figures. However, the Amsterdam regents preferred a lazy *dolce far niente* rather than the exciting pastoral scenes painted by Rubens and others. When their portraits were painted at their manors, it was always in full dress.

There were also country estates in the east of the Netherlands, but people originating from the towns did not live there. Rather, they were inhabited by large landowners who fostered the remnants of the feudal system and exploited their estates in an utilitarian manner through a number of farms. Nevertheless, they created around their houses their own Arcadia, often in the form of an English garden.

Initially, only the very rich could afford to dwell outside the towns. Other townspeople had to content themselves with less expensive solutions, such as small summer houses (theekoepel) immediately beyond the walls. However, most town dwellers satisfied their arcadian-paradisaical impulses with a stroll in an urban park or to a café along an arterial road. The first parks were constructed in the eighteenth century. They were rather formal and the paths were often designed in the form of a star. In the 19th century the English landscape style became dominant, which was promoted by landscape architects such as Zocher and Springer.[12]

In the 19th century the industrialisation and the growth of the transit trade along the Rhine resulted in the rapid increase in the numbers of the newly rich, who in turn followed the example of the Amsterdam regents. Industrialists and tradesmen from Amsterdam settled in het Gooi, a country region south of Amsterdam. It was easily accessible thanks to the opening of a railway in 1845. A part of the Rotterdam elite moved to the Hague, to the Van Stolk Park and other villa parks which were created in the healthy sandy area near Scheveningen. This was facilitated by the construction of an electric railway from Rotterdam to Scheveningen.

The train and tram also enabled the wealthy inhabitants of Utrecht to settle in the hilly eastern part of the province, where many country estates were built. At the same time, members of the lower social orders could profit from the rising

[12] Maurits van Rooijen, *De wortels van het stedelijk groen: een studie naar ontstaan en voortbestaan van de Nederlandse groene stad* (Utrecht, 1990).

standard of living and the new means of transport. In part they also left the towns. Het Gooi - an area where some villages became towns - and the area around Arnhem and Nijmegen - two places which were easily accessible by train - became popular locations.[13]

Arcadian enclaves thus increasingly appeared in the countryside. Even some provincial natives followed this example. A number of large farmers in the province of Groningen transformed their kitchen gardens and orchards into so-called 'slingertuinen' in the English landscape style.[14] This arcadian-paradisaical environment was not restricted to the countryside. The defortification of cities, which was completed around 1874, enabled the construction of extensions to towns following this tradition. This is illustrated by the villa quarters around the towns. The construction of these quarters was often combined with the creation of parks. The Sarphati Park and the Vondelpark in Amsterdam are good examples.[15] Sometimes, parks were created by industrialists to provide the lower income groups – among them their own employees – with paradisaical retreats of their own. Examples of the type include the People's Park (Volkspark) in Enschede and the Town Park (Stadspark) in Groningen. Entrepreneurs also built villages for their labourers near their factories, related to the garden city idea.[16] Moreover, the spirit of utilitarianism and Arcadia was combined in allotment gardens, which appeared around 1900 in connection with the extension of towns.[17]

All these developments implied the dissolution of the border between town and countryside. The quarters for labourers at the outskirts of the towns now alternated with villa parks for the well-to-do along the arterial roads. This, however, was not considered as a harmonious mix. A growing number of people were frightened by the expanding industries and the fast extension of towns. In their opinion what was left of nature was now severely threatened. This fostered a new vision of nature, which could be termed *nature-empathic* because people wished to know nature by projecting themselves into it.

The countryside as a nature reserve

Living nature, rather than stuffed animals and dried plants, was what the pioneers Eli Heimans and Jac. P. Thijsse - both teachers - were looking for in the countryside.[18] In the west of the Netherlands almost all the arable land had been brought into cultivation, with only the dunes and riverbanks preserving some 'unspoiled' nature. In the east there was somewhat more nature but this was also

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[13] Kooij, 'Stad en platteland'.
[14] IJnte Botke, *Boer en heer. De Groninger boer 1760-1960* (Groningen 2002).
[15] Michiel Wagenaar, Amsterdam 1876-1914. *Economisch herstel, ruimtelijke expansie en de veranderende ordening van het stedelijk grondgebruik* (Amsterdam 1990) Ch. 7.
[16] C.G.P. Linssen, 'Over fabrikanten en hun inspanningen tot verbetering van de arbeidershuisvesting, in W. Frijhoff & M. Hiemstra (eds.) *Bewogen en bewegen* (Tilburg 1986).
[17] C.L.W. Ruys, *Het belang van de volkstuinen* (The Hague 1958).
[18] J.P. Verkaik, Jac P. Thijsse. *Een leven in dienst van de natuur* (Zutphen 1995).

threatened. It was necessary to draw attention to it and to take measures for its preservation.

The nature-empathic vision did not distinguish wasteland. On the contrary, this was viewed as interesting and worth studying and preserving. The attitude engendered many associations for the study of nature and associations for its preservation, such as the Nature Conservation Society (1905).[19] Even the national government founded the State Forestry Authority (1899), targeted not only at the production of wood but also at the conservation of forests. The Nature Conservation Society started to buy nature reserves, such as a lake near Amsterdam (Naardermeer) and country estates in various parts of the country.[20] Parts of these country estates were not very natural, but at that time the boundary between the arcadian and the empathic visions was not very distinct.

This diffuse boundary was also accentuated by the way the Dutch Touring Club (ANWB) - founded in 1883 - organised its members' encounters with nature. The cyclists were safely guided by signposts along cycle tracks, and pedestrians also got their well-marked tracks.

In 1919, in the province of Gelderland, the first provincial association for the protection of nature was founded. This initiative was soon copied in the other provinces. They all bought their own nature reserves. Initially, these associations confined themselves to the conservation of these areas. Around 1970, however, they started to work to reinforce 'nature values'. This term was invented at that time.[21] Nature values could be strengthened by improving existing nature reserves, for instance by raising the groundwater level. However, new reserves were also created, especially in the estuaries of the major rivers. The spontaneous genesis of a natural area in the recently reclaimed IJsselmeer polder Oostelijk Flevoland acted as a catalyst. This rather wet area was set aside by the planners and was extremely rapidly colonized by rare plants and animals. This suggested potentially similar outcomes elsewhere.[22]

It is tempting to regard this active creation of natural areas emerging from within the nature-empathic vision of nature as implying a complete revolution in thinking. Instead of a process of cultivation, the reverse was carried out. In fact, this creation of natural areas could be considered as merely a special form of cultivation, on account of the need for a set of active conservation measures, such as the introduction of large grazing animals to keep an area open.

Nevertheless, this creation of natural areas was experienced by many people as a culture shock. They were upset by the substitution of well-cultivated countryside areas by waste nature, given that so much effort had been put into ridding the country of wasteland in previous times. They mobilised opposition. However, they also had to cope with other developments in the countryside.

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[19] H. van der Windt, *En dan, wat is natuur nog in dit land. Natuurbescherming in Nederland* (Meppel 1995).
[20] H.P. Gorter et al., *Vijftig jaar natuurbescherming in Nederland* (Amsterdam 1956).
[21] Van der Windt, *En dan, wat is natuur nog in dit land*, 139.
[22] Frans Vera, *Metaforen voor de wildernis. Eik, hazelaar, rund en paard* (Wageningen 1997).

The countryside as arena

According to the landscape specialist R.J. Benthem, the Dutch landscape was at its zenith around 1900. The land was not densely populated, it supported only 5 million inhabitants rather than today's 16 million. In addition, this number of people was living in balance with nature. The limited options offered by technology resulted in a sound use of water and land, which preserved the environment. Moreover, the skyline was uncluttered, agriculture was small-scale, and most country estates were inhabited by individual owners and still had their original structure and functions.[23]

As we have already seen, a number of people living around 1900 had a different opinion. Viewed with the benefit of hindsight, they had many reasons for their feelings. The big cities in the west had exploded in size, especially Rotterdam, which between 1870 and 1900 grew from 116,000 to 318,000 inhabitants. Furthermore, the new industrial cities of Tilburg (woollen industry), Enschede (cotton industry) and Eindhoven (electronics) were spreading rapidly across the countryside. The railways had reached all four corners of the country, taking up a lot of land, while the new canals in the west - the Nieuwe Waterweg (1872) near Rotterdam and the Noordzeekanaal near Amsterdam (1876) - had started the partial transformation of the dune landscape into that of industry.

The scale of agriculture had also changed. In the early 19th century in the richest areas, such as Groningen and Zeeland, large farmers typically had fifty hectares. In Groningen between 1828 and 1910 the number of farmers cultivating fifty hectares or more rose from 278 to 719.[24] The villages, however, had more or less remained the same. During the Great Depression (1878–1895) many inhabitants had left their villages for the large cities in the west or the United States. There were some exceptions - the villages near Amsterdam, Rotterdam and the Hague were turning into towns. Since most nature conservationists also lived in these big cities, these were the villages they considered as typical, and this of course increased their concern for the destruction of the countryside.

Nevertheless, there remained room for all three visions of nature: the utilitarian, the arcadian-paradisaical and the nature-empathic. The adherents to the empathic vision had no objection to the clearing of moorland, which they considered of little value. However, the list of the most valuable nature areas, which was made around 1930 by the associations for the conservation of nature, aroused the first opposition from the farmers' organisations.[25]

After the Second World War, the opposition increased. The utilitarian farmers, who had proved to be of enormous value to the food supply during the War, now received the support of the Government in its effort to attain food

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[23] R.J. Benthem, 'De toekomst van het landschap', in *Spectrumatlas van de Nederlandse landschappen* (Utrecht 1979) 252.

[24] Peter Priester, *De economische ontwikkeling van de landbouw in Groningen 1800-1910*, A.A.G. Bijdragen 31 (Wageningen 1991) 96.

[25] Van der Windt, *En dan wat is natuur*, 109.

security. The Land Consolidation Act of 1954 completely acceded to the needs of the farmers. The reconstruction of the countryside and the reclamation of the IJsselmeer polders was performed in an utilitarian manner. This was combined with stimulus for farmers to expand their farms within the new European economic structure, while small farmers obtained the option to liquidate their activities.[26]

However, groups with a different vision of the countryside also manifested themselves. Initially the growing population was confined to the cities, where the luckiest managed to get their own apartments in tall blocks of flats while the rest had to lodge with other families. In 1966 a government communication was circulated granting some villages permission to grow. This resulted in suburbanisation around towns and cities, allowing the former town dwellers the opportunity to create their own paradises. This was such a success that in the west and the centre of the country some villages - such as Zoetermeer, Nieuwegein and Houten - almost completely disappeared beneath the new housing. Moreover, people who had remained in the towns also travelled to the countryside with increasing frequency, in many cases with their new cars. They came as tourists or holidaymakers and were able to spend the night at camp sites or holiday camps. Sporthuis Centrum (later Centerparks) launched a new paradisaical formula in the 1960s, with large tropical swimming pools, which was imitated on a large scale by other chains.

This implied additional claims on space, which were capable of threatening the claims of the nature-empathic. However, concern for the environment increased at that time, which meant extra support for empathic organisations, also from some political parties. Nevertheless, their claims for space were primarily rewarded in areas with low economic value such as river estuaries, the Waddenzee and poor soil in remote provinces.

Little by little the countryside transformed into an arena in which farmers, village dwellers and nature conservationists battled for control of scarce space. This was particularly true in the west of the country, the so-called Randstad, which was home to six million people - more than the population of the whole country a hundred years before. This demographic growth, combined with a rising standard of living, resulted in increasing numbers of families being able to afford a house with a garden in the countryside. On the other hand, however, agriculture industrialised, which placed a growing demand on space. Prices for land for economic purposes passed the magic threshold of NLG 100,000 per hectare, and real estate developers paid much more. Nature became priceless.

The countryside as a green area

Once the countryside had become an arena for competing visions and interests, the need for an arbitrator grew. The central government had to perform this

[26] Jan Bieleman, 'De Nederlandse landbouw in de twintigste eeuw', in Pim Kooij et al., *De actualiteit van de agrarische geschiedenis. Historia Agriculturae 30* (Groningen/Wageningen 2002) 27-49.

role. Spatial planning was introduced as its main instrument, to regulate the use of space by different parties. A second administrative layer, the province, also became involved. Provinces gained competence in the fields of building, environmental regulation and the economic infrastructure (transport and energy, for instance). The municipalities were initially kept out of these decision-making processes, but by the late 20th century they gained competence at the expense of the provinces. In the meantime, municipal regrouping had created much larger municipalities.

The policy context was provided by guidelines issued by the Ministry of Planning Affairs and other ministries. Marijke van Schendelen analysed these reports and has shown clearly their enormous impact, that they differed depending on which ministry published them, and that they were often surpassed by new developments that required fresh guidance.[27] Moreover, some policy statements implied subsidies, which caused considerable excitement in the lower administrative layers but also among academics focussed on the countryside.

Since the central government had no interest in creating polarisation between the three visions of the countryside and the claims linked to these visions, it developed, in line with the Dutch polder model, three concepts with which to approach disputes - green area (groene ruimte), modernisation of the countryside (plattelandsvernieuwing) and cultural heritage (cultuurhistorie). These concepts covered scientific programmes and practical measures.

The term green area was used for the first time in 1966 in the scientific field of agricultural engineering by Professor Van Duin in his inaugural lecture at the agricultural university in Wageningen.[28] At that time there was marginal but growing interest in preserving natural values in land consolidation plans by including small areas of nature into cultural areas. Engineers aspired to become involved in this creation of natural areas and it was therefore in their interest to abolish the difference between the cultural and the more or less natural landscapes. The government, having the same plan, adopted the term because the term green area implied a continuum in which the interests of farmers, other inhabitants of the countryside and its protectors could all be found.

The green area contains everything outside the towns and cities - villages inasmuch as they have a green aura, farms and farmland, forest, lakes, dykes and so on. From this perspective the discrepancies between culture and nature disappear. Farmers could act as stewards of adjacent natural areas and their land could become part of an ecological superstructure which was designed by the Ministry of Agriculture in 1990. This ecological superstructure should enable flora and fauna to spread across the country without restriction.

The green area has proved to be a firm concept, by offering a base for a broad variation in landscapes and functions. It covers village gardens as well as a meadows or corn fields, existing national parks like the Hoge Veluwe as well as re-

[27] Marijke van Schendelen, *Natuur en ruimtelijke ordening in Nederland. Een symbiotische relatie* (Rotterdam 1997).
[28] R.H.A. van Duin, *Boeren, burgers en buitenlui* (Wageningen, 1966).

cently created nature reserves like the Blue Chamber (Blauwe Kamer) along the Rhine between Rhenen and Wageningen.

An interesting case to test the elasticity of the green area concept could be the Blue City (Blauwe Stad) project. The east of the province of Groningen is a clay area in which only grain and sugar beet will grow. The fall of the corn prices threatened the profitability of the farms. Therefore, 800 hectares of arable soil will be inundated to create a lake. Expensive housing will be built alongside the lake, while 350 hectares will be transformed into nature. Agriculture will be marginalised. In fact the Blue City implies the end of the dominance of agriculture. Within the context of the green area a new equilibrium has to be found. This will not be easy because the farmers' organisations do not approve of this waste of land.

The same is true of the Green Heart. As noted above, the Randstad in the west of the country is gradually swallowing the green area within this conurbation, the Green Heart. This has resulted in the Green Heart becoming the front line in the countryside debate in the Netherlands.[29] It remains an open question whether the green area concept will moderate the discrepancies between the different parties.

Modernisation of the countryside is a concept that was launched in the 1990s by sociologists at Wageningen University and later adopted by the Ministry of Agriculture. It implied firstly the provision of an alternative for farmers who could not cope with the industrial mode of production in agriculture.[30] Apart from the claims made on them by arcadians and empathics, they were threatened by the European Union's revision of its agricultural policy - from interventionism to a free market system - which in most cases resulted in a fall in incomes. To remedy this, farmers tended to turn to solutions which had been successful in the past - intensification, extensification or specialisation in new products. Since the first two solutions were undesirable because of problems with manure and the scarcity of land, the third solution was promoted. The government provided financial stimulus for additional activities such as nature management, the growing of flowers or fish farming, running camp sites or bed-and-breakfasts at the farms, the provision of care for the elderly or the disabled, and so on. Additional attention was paid to regional products and to the reconstruction of regional farming styles.[31]

It was the intention of the modernisation concept to minimize the clashes between farmers and nature conservationists through the inclusion of both groups into the process of countryside management, with the regional specialisation approach promoted to farmers being felt to be something that could be appreciated

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[29] Guus Borger, Adriaan Haartsen & P.H.C. Vesters, in cooperation with Frits Horsten, *Het Groene Hart: een Hollands cultuurlandschap* (Utrecht 1997). See also the contribution on the Green Heart in this volume.
[30] H. de Haan & J.D. van der Ploeg, *Endogenous rural development* (Wageningen, 1994).
[31] Tialda Haartsen, Peter Groote & Paulus P.P. Huijgen, *Claiming rural identities. Dynamics, contexts, policies* (Assen 2000).

by people with arcadian-paradisaical views. There are many records of successful initiatives.[32] However, the question remains of course whether profitability is sustainable once the pioneers are imitated by many others. Moreover, the modernisation of the countryside concept is a container that can be filled with various innovations.[33] These innovations could also be developed by other countryside groups than farmers. These groups have already gained a majority. Even in the remotest villages the occupational structure is no longer dominated by farmers.[34] This makes the process of modernisation difficult to manage, particularly when financial claims are linked to it.

One of these claims has been already recognised. It is the concept of cultural heritage, one that has been taking shape since the 1970s. In the Netherlands it is called 'cultuurhistorie', a combination of historical geography, archaeology and building history. It centres on the development of the landscape over time. The early stages are analysed by archaeologists, while later stages are studied by historical geographers and building historians. Special attention is paid to remains that indicate former developments, landscape elements as well as artefacts in the landscape (such as mills, bridges, characteristic houses and farms).[35]

The *Belvedere* report, published by four ministries involved in spatial planning, contains an effort to develop scales for the evaluation of remaining landscape elements and artefacts in the landscape.[36] These scales are linked to regional characteristics which also play a role in modernisation processes. Cultural heritage is a central category, referring to specific landscapes - natural as well as cultural - and specific buildings.

In fact, within the concept of 'cultuurhistorie' attention is paid to the spatial effects of all three visions of the landscape. This implies some intention to reconcile these three visions. However, the *Belvedere* report states that it will be not necessary or possible to preserve all these effects. Only the most characteristic elements should be protected. However, the setting may change in time. Protection by development ('Behoud door ontwikkeling') is the report's catchphrase. It is thus that an authentic brook or a characteristic pumping-station gets incorporated into a market-gardening area, a town extension or a rough natural area.

The countryside after 2000

Historians do not like to predict the future. They are in a unique position to know that things will always turn out differently. During a boom, priorities are quite different from those in times of crisis. An integrated approach leads to dif-

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[32] R. van Broekhuizen, L. Klep, H. Oostindie & J.D. van der Ploeg, *Atlas van het vernieuwend platteland* (Doetinchem 1997); Jan Douwe van der Ploeg, *De virtuele boer* (Assen 1999).

[33] W. de Haas, et al. *Kennis in plattelandsvernieuwing,* (The Hague 1997).

[34] Dirk Strijker, 'Agriculture: still a key to rural identity?', in Haartsen, *Claiming rural identities,* 47-55.

[35] J.H.F. Bloemers & M.H. Wijnen, *Bodemarchief in behoud en ontwikkeling. De conceptuele grondslagen* (The Hague 2001).

[36] Ministeries van OCenW, LNV, VROM, Verkeer en Waterstaat, *Nota Belvedere. Beleidsnota over de relatie cultuurhistorie en ruimtelijke inrichting* (The Hague 1999).

ferent results from an *ad hoc* policy where different parties at different times are differently rewarded. One thing is clear. In the future it will be impossible to have an exclusively utilitarian, arcadian or empathic view of the countryside. There is simply not enough space to meet these conflicting claims. Therefore, utilitarians who propagate large-scale agriculture on large plots of land have to move to the IJsselmeer polders and the sparsely populated corners of the country, or go abroad. People with arcadian sensitivities will notice that the cost of living in their own paradises in the countryside will rise enormously, which results in many people having to stay in or to go back to the compact cities. Finally, the nature-empathic will have to accept that 'their' areas will become easily accessible to holidaymakers and tourists.

Therefore, the only vision of the countryside which will stand the test of time will be a vision in which the three approaches are more or less combined and the sharp dividing lines have disappeared. The outcome will thus be typically Dutch – a green area with the characteristics of a polder landscape.

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The tiger and the tram. Zoos as an urban wilderness.[1]

The transformation of the zoological garden

Blijdorp Zoo in Rotterdam has a new Asia section. You find yourself wandering through bamboo forests, passing a copy of the Angkor Wat temple, because the original, of course, is in Cambodia, and then suddenly you find yourself face to face with the rare Sumatran tiger. It gives you a start, but fortunately not for long. Because you then notice the glass wall and at the same time you also hear the screeching sound of the tram taking the bend in the Van Aerssenlaan, a little further up the street. For the tiger too, it is a familiar sound, because he doesn't even look up, just like the tigers in Hagenbeck's zoo in Hamburg which totally ignore the planes constantly landing and taking off just above their housing.

The first time I visited Blijdorp, some 60 years ago, the tigers were not behind glass at all. At the time they were housed in an architectural wonder. Animal housing designed by Sybold van Ravesteyn, a predator gallery with an elegant symmetry, with terraces, few bars and a moat to protect the viewing public.[2] Van Ravesteyn was initially an adept in the new style of building but combined it in the 1930s with a sort of Tuscan baroque with pillars and curlicues, and concrete walls that looked padded. He was associated with the Netherlands Railways (NS) where he caused a commotion with his modern signal boxes which, and which in his Italian phase, led to very distinctive station buildings, culminating in Utrecht Station. In 1939 he also built the offices of the insurance company Verzekeringsmaatschappij Holland in Dordrecht which, in terms of its architecture, very much resembles Blijdorp and, almost at the same time also in Dordrecht, in the rather angular Kunstmin theatre he created a glamorous Hollywood-style palace.[3]

Blijdorp was a complete design. The old Rotterdam zoo in the centre between the Delftse Poort and Kruiskade stations was too much in the way and had to be moved. The moment chosen for this, 1940, was rather unfortunate, because while the new zoo was still under construction the old one was bombed.

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[1] English version of the farewell speech given on 1 February 2010 in the great hall of the University of Groningen.

[2] Joh. De Vries, *Ir. S. van Ravesteyn, Diergaarde Blijdorp* (Rotterdam 1986).

[3] His architecture was controversial. His admiration of Italian architecture, design elements of which the Fascist regime also made use of, was held against him. After the war his style moved more in the direction of the Delft school of Granpré Molière, as shown by the stations of Nijmegen, Vlissingen, Gouda and Den Bosch. See Kees Rouw, *Sybold van Ravesteyn. Architect van Kunstmin en De Holland* (Rotterdam 1988). But this shifted again in the much more modern Rotterdam Central Station.

This was humorously written about, particularly about the sea lions who ended up in the canal, but it was, of course, a catastrophe. Those of the animals that had survived were quickly transferred. Not the tigers unfortunately, because, like the other predators, they were shot because of the risk of escape.[4]

Predators gallery in Blijdorp Zoo by Van Ravesteyn, 1982 (photo Pim Kooij)

[4] K. van Zwieten, C. van Doorn, *125 jaar diergaarde* (Rotterdam 1982) 31.

But after the war new tigers arrived, Siberian ones, which were already rare even then. They were given a concrete shelter, a nicely adapted home with a comfortable indoor section. Why are they no longer there? This is because there was a shift in what zoos saw as their objective. They no longer wanted to be just a menagerie, an ordered display of safely caged animals, but to offer a perceptive experience in which people can wander through the jungle. Although it should not be too natural either. Because should there be a direct encounter between human and animal, a gorilla in this case, it can turn out be more complicated than people might have thought.[5]

This is what I want to talk about today. The changing roles of zoos. This is not just because zoos have held a life-long fascination for me, but also because this subject gives me an opportunity to combine both the Groningen and the Wageningen work. In Groningen I am mainly involved with the urban environment and in Wageningen with green space. Zoos combine both these elements, as I have already shown, but in the past this combination has taken various forms. I will try to see if there is a pattern in this.

Zoos up until the 19th century

I will not cover the early history of zoos in any great detail. Menageries were already known to exist in classical antiquity beyond just the livestock kept for the Coliseum, which was more of a commodity. Some Pharaohs had already created real menageries, while Alexander the Great also built up an extensive collection in Alexandria.

Zoos were an expensive hobby, and it was thus only those at the top of the human social hierarchy who could afford them. Essentially it was mainly rulers and monarchs who kept menageries, in which exotic animals were a desired gift in forging a relationship. Charlemagne, for example, received an elephant from the Caliph of Baghdad, Harun al-Rashid. This elephant however did not live in a zoo, but travelled with Charlemagne, although more peaceably than Hannibal's elephants. He died, as it happens, on the battlefield in 810, in a battle with the Danes.[6] The German emperors Otto I and Otto III had what were large collections for the time, which included lions and ostriches. Animal collections were often ambulant during the Middle Ages. Frederick II, for example, was accompanied during his trip through Italy in 1245 by five leopards, 24 camels and an elephant. The first real zoos were created in the late Middle Ages, such as the princely collections in Angers and Nancy.[7]

In England too, a royal menagerie was set up by Henry I at Woodstock which, among other things, included lions, leopards, lynx and camels. Henry III

[5] On 18 May 2007 the gorilla Bokito jumped over a moat thought to be impassable and out of anger attacked a member of the public who visited him almost daily and smiled at him, which was seen as a threat. He bit her many times and caused havoc in the restaurant before he could be sedated.

[6] Raymond van Uytven, *De papegaai van de paus. Mens en dier in de Middeleeuwen* (Leuven/Zwolle 2003) 264.

[7] Van Uytven, *De papegaai van de paus*, 264.

had it moved in 1252 to London, to the foot of the Tower. There was also a polar bear which, secured to a rope, could catch its own food in the river Thames. And two years later, an elephant arrived, a gift from Henry's son-in-law, Louis IX of France, who also kept his own menagerie.[8]

A number of Popes also collected animals. Clemens VI had a bear in Avignon, a deer, a wild boar and a lioness. And almost every Pope in the late Middle Ages kept parrots. These were ring-necked parakeets, originally from Africa and India, which had already been brought to Europe as cage and aviary birds in ancient times. Real parrots arrived at the start of the 16th century from the new colonies, together with a great many more new animals. Philip I of Castile already kept wild buffalo, rheas and turkeys. And as early as 1515 the first rhinoceros was brought to Europe, to Lisbon. It was an Indian rhinoceros which had been given to the Portuguese viceroy by a local sultan. The viceroy, Alfonso de Albuquerque, sent it on to King Manuel I. Who in turn, presented it as a gift to the Pope, but the animal never arrived in Rome because it drowned during a storm at sea. It was of this rhinoceros that Dürer made his famous drawing. He based it on hearsay, but nevertheless managed to create a reasonable likeness, apart from the extra horn on its back.

But what was actually the purpose of all these menageries? Perhaps in part entertainment, because one ruler was more serious in the collection of animals than another. Frederick II and Louis XI were ardent collectors. But the most important function of these early collections was essentially to underline the high status of their owners. Anyone who was a ruler had their own private zoo. And by making gifts of animals to one another, they confirmed their status among one another. Exchange even more so, since this made them equals. Frederick II, for example, exchanged a white bear for a giraffe with the sultan of Egypt.

Some animals, however, were added to the domesticated band of working horses, dogs and birds. Leopards, for example, were used for hunting, but there was still a boundary between birds of prey and pet birds, which was less the case with poultry. Keith Thomas describes how during the 17th and 18th centuries people in North West Europe started to develop more sympathy for animals and began to oppose cruelties, such as Spanish bullfighting.[9] But this does not detract from the fact that people dealt with animals in an entirely utilitarian manner; they were there for the benefit and enjoyment of people.

This is a remarkable observation. In this same period, alongside the utilitarian view, a different attitude towards nature started to arise which can be termed as arcadian-paradisiacal. It first began in England, but soon took hold in the Dutch Republic and other countries, where the elite started leaving the cities which they found to be too dirty, unhealthy and overpopulated. They settled in the countryside where they built their estates, in the Netherlands in the dunes and

[8] Wilfrid Blunt, *The Ark in the Park. The Zoo in the Nineteenth Century* (London 1976) 16.
[9] Keith Thomas, *Man and the natural world. Changing attitudes in England (1500-1800)* (Harmondsworth 1983) ch. 3.

along the Amstel and Vecht rivers, for example. Around these country houses, formal gardens were laid out which were intended to provide a civilised contrast with the uncultivated marshland beyond. But these gardens soon started to become more lively, with winding paths, ponds, hillocks and small groups of trees. They gave the impression of nature as being something agreeable or pleasing, and making reference to the Greek Arcadia or to Paradise. People liked to spend their time there relaxing.[10]

In essence, the elite created their own paradise on these country estates. And so you would expect this paradise to be decked with fauna, as Breughel and Rubens showed in their collaborative painting on the Fall of Man, for example. But that's not how animals were portrayed, although the occasional pheasantry did suggest that. In the literature, however, the collections of exotic animals were primarily linked to the curiosity collections which were beginning to appear at that time. Animals generally did not live long in captivity and a not inconsiderable benefit of this common event was that a dissection could be performed, which then revealed a great deal about the anatomy of the animal. This was then painstakingly drawn after which the animal was preserved in formaldehyde or if it was rather larger, stuffed and mounted, or if the dissection had been rather too exhaustive, only the skeleton was prepared. It is therefore not surprising that the public official, Arnout Vosmaer, who himself had set up a renowned collection of natural curiosities after becoming director of the natural history collection of stadholder Willem V in 1756, also became administrator of his menagerie.[11]

This menagerie of Willem V was the most famous 'Dutch' animal collection of the Old Regime. It was initially based at Het Kleine Loo near Voorburg. The basis for the collection was formed by gifts which were brought with East India Company (VOC) ships, including orang-utans. Two young Indian elephants, Hans and Parkie, were added in 1786. A couple of months later they accompanied the stadholder to Het Loo near Apeldoorn, where he felt safer. During the French occupation in 1795 the collection was confiscated, some of it was eaten and the rest taken to Paris: the transport of the elephants was no mean feat. They were added to the menagerie in the Jardin des Plantes. Hans died there fairly soon afterwards, but Parkie, in the meantime auspiciously renamed Marguerite, lived there until 1816.

In the 18th century a couple of civil collections were begun by ordinary people. Usually these were travelling collections which, possibly as part of a fair, travelled from town to town but which at a certain point in time remained behind at a particular place. One famous collection was that of 'Blaauw Jan' Berentsz Westerhof, an innkeeper on Kloveniersburgwal in Amsterdam, a menag-

[10] Pim Kooij, *Mythen van de Groene Ruimte* (Wageningen) 7.

[11] Florence Pieters & Kees Rookmaaker, 'Arnout Vosmaer, topcollectioneur van naturalia en zijn *Regnum animale*', in B.C. Sliggers and A.A. Wertheim, *Een vorstelijke dierentuin. De menagerie van Willem V* (Zutphen 1994) 11-39.

erie which remained there for more than a century, until 1784.[12] Apart from birds, lions, tigers, panthers and baboons, dwarfs and giants were also put on display, it was always a fairground attraction but also attracted visitors interested in natural history, such as Linnaeus and Emperor Joseph II of Austria.

A very famous fairground attraction was a rhinoceros which I mention only because it twice visited Groningen, in 1745 and 1756.[13] It was also a native of Groningen who was behind her arrival in Europe. That was Joan Albert Sichterman, later known in Groningen as the Bengalese Sichterman, who was an East India Company (VOC) director there and became extremely rich.[14] She had been given to him as a baby by a great Mongol in 1738 and was allowed to roam about his house. But Clara, as she was called, grew bigger and started to behave like a rhinoceros in a china shop. Therefore in 1840 she was given away to a ship's captain, Douwe Mout van der Meer, who with a great flair for marketing travelled around Europe with her for 18 years. [15] However this involved considerable effort. Clara weighed more than 2000 kilos, was housed in a special wagon which had to be drawn by at least eight horses, but on poor roads more were needed. There was royal and even imperial interest here too. She was seen by Frederick II of Prussia, for example, and Franz I and Maria Theresia of Austria, Louis XV of France and the English royal family.

These fairground menageries were purely utilitarian, there was nothing arcadian-paradisiacal about them. But this was different with the sovereign collections. Towards the end of the 18th century there was an interesting development. They became more professional and opened their doors to the general public, who in this way gained access to the little paradise.

The first menagerie where this took place was the imperial one in Austria. The menagerie was situated in Neugebäude to the south of Vienna, but on imperial orders was moved in 1852 to Park Schönbrunn in Vienna, where the imperial palace was also situated.[16] It was a baroque-style round garden, essentially divided into pie-slices with the animal housing along the perimeter and a pavilion in the centre. In 1778 this menagerie was opened to the public.

The second modern zoo was the Jardin des Plantes in Paris. A royal collection was also housed here, although hardly with the permission of its owners. In the context of the revolution, the Royal Menagerie was transferred in 1792 from Versailles to Paris. Here the zoo became an annex to the 17th-century medicinal herb garden which had been laid out in 1626 by the personal physician to Louis XIII, Guy de La Brosse. The plans for both gardens show an interesting contrast.

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[12] http://www.freewebs.com/showbanded/blaauwjan.htm. Accessed 4-11-2009; F.J.M. Pieters and M.F. Mörzer Bruyns, 'Menagerieën in Holland in de 17e en 18e eeuw' *Holland, regionaal-historisch tijdschrift* 20 (1988) 195-209.

[13] Willem G. Doornbos, 'Clara de Rinoceros', *Stad en Lande* 15 (2006) 32-35.

[14] Wiet Kühne-van Diggelen, *Jan Albert Sichterman, VOC-dienaar en 'koning' van Groningen* (Groningen 1995).

[15] Glynis Ridley, *Clara's Grand Tour: Travels with a Rhinoceros in Eighteenth-Century Europe* (New York 2005).

[16] Mitchell G. Ash (ed.) *Mensch, Tier und Zoo – Der Tiergarten Schönbrunn im internationalen Vergleich vom 18. Jahrhundert bis heute* (Vienna 2008).

The herb garden had always had a formal design, while the zoo had more the appearance of an English landscape garden. But both fit within the Arcadian concept.

In the 19th century a new type of zoo started to appear, which could be called the public zoo. The first was the London zoo, founded in 1828 by the Zoological Society of London, which had been set up two years before. This was a learned society which was intended to disseminate zoological knowledge by presenting a collection of living animals, which could be viewed by the public but were primarily intended to be studied - dead or alive - by scholars, finally to end up in a related museum. The London zoo - the abbreviation which became popular in the 1860s - was presented with the almost moribund royal collection in 1848. Similar collections were transferred elsewhere too, such as in Madrid and in Prussia where Frederick William IV had already given away his animals in 1841.[17] And thus zoos ceased being a sovereign institution. Rulers had in the meantime found other less costly ways of parading their status. But what would the zoo now become?

Zoos for burghers?

The London example was followed in many other places. As early as 1831 a Zoological Society was set up in Dublin. And in 1838 the Natura Artis Magistra society was set up in Amsterdam, which started a zoo in the Plantage. This Amsterdam initiative in turn served as an example to Antwerp where in 1843 the Maatschappij voor dierkunde was set up to found a zoo, which was opened in the same year.[18] In Berlin the Zoologischen Garten opened in 1844.[19] The relationship with the Zoologische Gesellschaft (zoological society) which was set up at the same time, was vague. Shares were issued but these zoos were largely dependent on visitors to cover operating costs. No entrance requirements were therefore instituted.

Can we now call these bourgeois zoos because they were set up for and by burghers? To be able to answer this question we must first consider 'who are the burghers', a discussion which I have already entered into further to the publication of the book *De stijl van de burger* by Remieg Aerts and Henk te Velde.[20] My particular problem with this book is that nowhere is the burgher defined as a social group but rather as those that have a certain mentality, more of a cultural identity, essentially. This style could be found among the upper as well as the middle classes, thus among the elite and middle social strata, as well as the upper layers of the artisan class. But when this is applied in practice the result is quite

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[17] The menagerie was set up by his predecessor, Fredrick William III, on the Pfaueninsel in Potsdam.

[18] Roland Baetens, *De roep van het paradijs. 150 jaar Antwerpse zoo* (Tielt 1993).

[19] Harro Strehlow, 'Die entwicklung der Zoologischen Gärten – Das Beispiel der Berliner Tierhaltungen', in Ash, *Mensch, Tier und Zoo*, 315-334.

[20] Remieg Aerts and Henk te Velde (eds.) *De stijl van de burger. Over Nederlandse burgerlijke cultuur vanaf de middeleeuwen* (Kampen 1998); Pim Kooij, 'De burger in een sociaal-historische context', in *Stijlen van burgers. Groniek Historisch Tijdschrift. Special edition* (2007) 133-145.

different. If we look at the background of the members of book clubs or theatre season-ticket holders, then who do we primarily see but the genteel middle classes. The odd schoolteacher may occasionally be seen, but the upper layer of the working class is skilfully excluded. In fact, book clubs or reading circles in the first half of the 19th century were more exclusive than ever. Even women were no longer allowed to take part.[21]

The entrance of Artis Amsterdam, 1883 (collection author)

At Artis it was also the upper elite who called the tune, at least on the board. Donna Mehos clearly shows this. She has published an interesting dissertation on Artis which was further developed in a later publication.[22] Her overview of the members of the Artis board shows that they were mainly business proprietors, predominantly in the services sector, as well as those practising the professions, particularly lawyers. Here Donna Mehos sees a combination of the established patrician order and the new bourgeois elite, but what I see first and foremost is new money, which gives immigrants and Jews a seat on this body, for example.

[21] Boudien de Vries, 'Lezende burgers. Cultuuridealen en leespraktijk in burgerlijke kringen in de negentiende eeuw', in *Stijlen van Burgers. Groniek special edition* (2007) 39-65. See also Henk Gras, 'Theater: vermaak voor alle burgers? De casus Rotterdam 1773-1916' in *Stijlen van Burgers. Groniek special edition* (2007) 65-99.
[22] Donna C. Mehos, *Science Displayed: Nation and Nature at the Amsterdam Zoo Artis* (PhD Dissertation University of Pennsylvania 1997); Donna C. Mehos, *Science and Culture for Members only. The Amsterdam Zoo Artis in the Nineteenth Century* (Amsterdam 2006).

In this context it might also be useful to look at where the board members lived, because their background also reflects the social structure of the Plantage, a chic new residential area, settled not by the established elite but by the new rich, and where Artis was set up. [23]

Viewed in a social history context, what you first see is a group of social climbers who presented themselves through a sort of country club which was exclusive to its own, where there were many extraordinary things to be seen and where interesting activities took place. They would prefer, just as in London on Sundays, to keep the zoological gardens closed, but to provide sufficient operating revenue, visitors were a necessary evil. There were, of course, idealists, such as the founder Westerman, who saw Artis primarily as a centre for zoological research. There were also people who wanted to use Artis to raise the national cultural standard. But it would seem to me to be going too far to see Artis primarily as a vehicle in the design of a bourgeois national culture. It was rather more the collective Arcadia of a new urban elite, who would no longer have to leave the city to find it. The ease with which the academic elements were put aside after 1876 in the direction of the new University of Amsterdam, supports this view.

In this context it is worthwhile to make a comparison with the two other 19th-century Dutch zoos, in The Hague and Rotterdam. The comparison with The Hague can be made because it has been studied by Jan Hein Furnée.[24] The zoo in The Hague was set up in 1863 by the Koninklijk Zoologisch Botanisch Genootschap van Acclimatatie (royal zoological and botanical society of acclimatization), which like Artis was a learned society.[25] The founder was a physician, L.H. Verwey, who thought that his initiative would only succeed if there was ample support forthcoming from various social strata. For this purpose he decided that shareholders did not have to take part in a ballot. This caused a run on the shares among the upper middle classes, without this deterring the elite. As in Artis, the elite was mainly represented by merchants and those practising the professions.[26] But Baron Van Brienen, the richest man in The Hague, also played a part in the founding of the zoo. He was probably the person responsible for persuading the King to become its patron which in turn drew the most elegant members of Hague society to the zoological gardens.[27] However when Koekamp was proposed as a possible site a group of them opposed the founding of a zoo. They wanted this space to be preserved as a quiet and dignified place in which to walk.

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[23] Michiel Wagenaar, *Amsterdam 1876-1914. Economisch herstel, ruimtelijke expansie en de veranderende ordening van het stedelijk grondgebruik* (Amsterdam 1990) chs. 7 and 8.

[24] Jan Hein Furnée, 'Beschaafd vertier. Standen, sekse en de ruimtelijke ontwikkeling van Den Haag, 1850-1890', *Tijdschrift voor sociale geschiedenis* 27 (2001) 1-32. Jan Hein Furnée, *Vrijetijdscultuur en sociale verhoudingen in Den Haag, 1850-1890* (Groningen 2007).

[25] Acclimatisation is adaptation to a different climate or environment.

[26] Furnée, 'Beschaafd vertier', 12

[27] Furnée, *Vrijetijdscultuur*, 208-209.

Ultimately, nothing came of Verwey's plan to create a zoo for all social classes. Hague residents who were not members could not enter and people from outside the town had to pay a high entry fee of 50 cents. Nevertheless, The Hague zoo managed to cover a broader social spectrum than Artis. Women were also entitled to join. That this did not lead to the departure of the elite was probably because the elite had a number of other institutions where they could keep things entirely *entre nous*. However, not everything went smoothly. The board was dominated by The Hague smart set, which in turn led to letters being sent to newspapers saying that ordinary people were being shut out.[28] And it also did not lead to any real interaction between the various layers of society, people continued to avoid one another in the zoo gardens.

Perhaps it was this particular social makeup of the membership of The Hague zoo which led to it being described as the rather backward cousin of the Amsterdam and Rotterdam zoos. The chicken run, it was called, because of the many birds.[29] Initially therefore, no predators were kept.[30] Despite the public draw, Betsy, an elephant, of course,[31] the zoo became first and foremost a event centre providing meeting rooms. The new main building in the Moorish style dating from 1893, offered many facilities. After the closure in 1943, because the German defence line ran straight through it, it initially continued as such until this function too disappeared in 1968.

The Rotterdam zoo has been far less socially documented. This zoo was set up by a number of railway workers who in 1854 transformed a little field next to the Delftse Poort station into a small zoo with a clubhouse. Although it appeared to be a middle class initiative, in 1857 the good citizens of Rotterdam took it over and drew up the grandest plans to replace the old zoo with a new one.[32] The old zoo already had some 500 members who paid Hfl. 10 per year. The subscription for the new zoo was Hfl. 25, a month's wages for a skilled labourer. This artisan class therefore could only visit the zoo during the 14 days of the year that they could enter for a modest entry fee. For the rest of the year the zoo was the preserve of members and their guests from outside Rotterdam.

The centrepiece here too was the clubhouse, dating from 1872. The grand hall where concerts were given could hold up to 1000 people and was decorated

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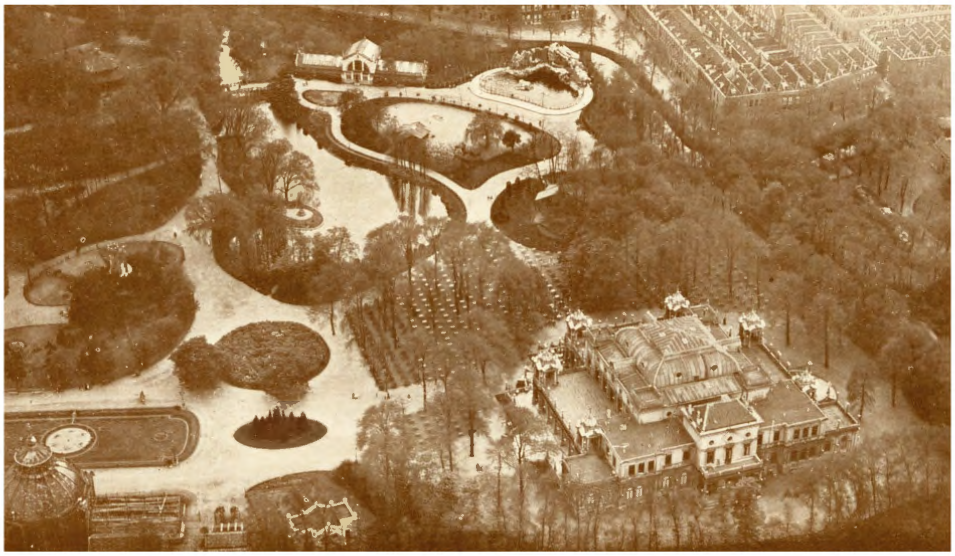
[28] Furnée, *Vrijetijdscultuur*, 242.

[29] It is interesting to note that around this time the desirability of having a country estate zoo was discussed at the annual Country Estate management Congress (see reports of 1852-1855). The idea was to build an annex to Artis. When the idea was mentioned again in 1879, The Hague zoo was not mentioned.

[30] This limited assortment was also because in Amsterdam and Rotterdam there were many shipping companies which from time to time brought animals with them from the colonies and other regions which were donated to the zoos there. A.C. van Bruggen, 'Van Z.M. den Koning, een casuaris voor de diergaarde. Aantekeningen over aanwinsten van de Hollandse dierentuinen in de 19e eeuw' *Holland, regionaal-historisch tijdschrift* 20 (1988) 223-237.

[31] There were, in fact, three successive elephants named Betsy. See G.J.M. van Baarsel, 'De Haagse dierentuin', *Holland, regionaal-historisch tijdschrift* 20 (1988) 238-250.

[32] These were 21 worthy gentlemen with distinguished name such as Mees, Van Vollenhoven, Ruys and Van Rijckevorsel: Van Doorn, *125 jaar*, 3. They issued Hfl. 300,000-worth of shares.



The Rotterdam Zoo 1925 (source: *Geïllustreerde Wandelgids* by K. Kuiper, collection author)

as a winter garden. There was a Floral hall with a cupola and a greenhouse for the Victoria regia lily. In the new Blijdorp, Van Ravesteyn would bring all of this together in the Riviera hall. In 1922 the zoo had 8000 members who paid Hfl. 45 per year. At this price, exclusivity could be preserved. Although the social background of the members has not been investigated, we may assume that the Rotterdam public will have been similar to that of The Hague, but then perhaps even more distinguished overall, although with less old money.

I do not have time to go into the acquisition policy in any depth in this presentation. But, as you might imagine, it was somewhat random in nature. Zoos were very much dependent on donations and what was offered by animal merchants. Orders could be placed which could steer them to some extent. But an expedition organised for this purpose could also fail. Added to this, the mortality among the animals was high. The apes in particular, the big crowd pullers, usually did not live long.

This coincidental supply, fed by the high level of mortality, probably had an impact on what form the zoos took. It was of no use to exhibit a complete overview of the animal kingdom, even though this had long been the ambition of a number of zoos, particularly those in London and Berlin. There they aimed to show all four of the ape species then known, Bengal, Sumatran and Siberian tigers, Asian and African elephants, white, black, Indian, Javan and Sumatran rhinoceroses, and two tapir species, etc. In Artis too, there was a whole range of pens for bovine species. But ultimately this complete range could only be displayed in the natural history museums which the major zoos also generally had.

In the zoo itself, merely the suggestion of completeness was sufficient. And because the animals did not have to be presented to the members in this way, they could be exhibited in a park-like setting, usually in the English landscape style.[33] The visitors were familiar with city parks and saw the cages with wild animals as an exciting added feature. But by around 1900 that was no longer sufficient.

The wilderness in the city

Around 1900 a new attitude arose alongside the utilitarian and arcadian view of nature. Industrialisation and urbanisation had reached such proportions that some people began to see them as a threat to what was left of 'unspoilt nature'. In many countries, nature conservation organizations were set up which were intended to preserve the last areas of outstanding natural beauty and people began to take an interest in living nature. I have termed this new view of nature as nature-empathic. People wanted to get to know nature by spending time there, both literally and figuratively.[34] In the Netherlands this vision of nature was propagated by the educators Jac. P. Thijsee and Eli Heimans. In 1896 they set up the journal *De levende natuur* [Living Nature] with the subtitle *Tijdschrift voor natuursport* [Journal for outdoor pursuits].

The question is, of course, what did this mean in relation to zoos, which had thus far been so closely linked to an arcadian-paradisiacal view of nature. The first and the third issues of *De levende natuur* give a rather unfortunate response to this. Thijsse reports in this issue that in 1894 he went to Texel with curator P.L. Steenhuizen of Artis to collect material for a diorama on Dutch fauna. And this is what he further wrote:

'I had not gone far when some lovely white birds flew up, slightly larger and more slender than lapwings, with long slate-grey legs and a slender upturned beak. "Kloot, kloot, kloot" were their short and loud calls as with their rapid wing beats they quickly swept upward….They were not at all timid - on the contrary. One came right at me, not at full speed, but with small jerky movements, as if he wanted to take the time to take a good look at me. Even his "kloot, kloot, kloot", sounded inquisitive. It was a dead easy shot, a child could have taken it. He dropped to the ground instantly, as if hit by lightening, this splendid bird, and not a spot of blood marred the immaculate white of his plumage. Steenhuizen was polite enough to applaud and I was pleased that it had been approved for the collection so that, for the time being at least, no more avocets had to be shot.'[35]

Here we catch a glimpse of the other side of the great nature conservationist. It also shows, however, that the new nature-empathic view, in which living nature is sought out, still has some rather less 'pure' elements to it. But this equally applied to the nature conservation movement, which in the Vereeniging tot Be-

[33] Annette Graczyk, 'Der Zoo als Tableau', in Ash, *Mensch, Tier und Zoo,* 97-111.
[34] Kooij, *Mythen van de groene ruimte*, 8.
[35] *De levende natuur*, year 1, issue 3 May 1896, 44.

houd van Natuurmonumenten [Society for the Conservation of Natural Heritage] founded in 1905, mainly bought up country estates, cultivated land, in other words.

Incidentally, Thijsse came about in the end. He was actively involved in the founding of the Nederlandse Vereeniging tot Bescherming van Vogels [Netherlands Society for the Protection of Birds] in 1899 and henceforward, like Steenhuizen, stuck to shooting birds with a camera. Naturally support for this nature-empathic movement grew out of the public support for animal protection, as well as the Nederlandsche vereeniging tot Bescherming van Dieren [Netherlands Society for the Protection of Animals] founded in 1877, even though this society was primarily aimed at pets.[36]

To be able to fit in with this new attitude towards nature, the zoos had to demonstrate their intention to show living nature. In a time when people could hardly travel to other continents to see the living nature there, it therefore had to be brought to them. This led to the construction of natural environments which appeared to have been imported from elsewhere. The individual who wanted to patent this was Carl Hagenbeck, who in 1896 had already applied for one for a 'Naturwissenschaftliches Panorama' [Natural Science Panorama],[37] in which the bars had been removed and, through a combination of terraces which were separated from one another and the visiting public by concrete walls and moats, a number of animals could be placed together which 'in reality' also belonged together without giving them the opportunity to eat one another. This plan was grafted onto the living raree shows which Hagenbeck took to world fairs, exhibitions and other events. The polar region, for example, was very successful. In the centre of Hamburg he had just such a panorama which was connected with his animal trading business.

In 1907 Hagenbeck opened a zoo in Stellingen, on the north side of Hamburg, in which he put these principles into practice. It was an immediate success.[38] There were already more than a million visitors in 1909. That may also have had to do with the fact that, as a true showman, Hagenbeck presented extra attractions. Every summer there was a human show, in which a different part of the world was presented each time, such as Nubia, Burma, the America of the Indians. Against a backdrop of suggestive scenery, natives of these regions, who lived temporarily in the park, presented a show a couple of times a day.[39] And in between there were also the trained animal demonstrations and fairground attractions, such as merry-go-rounds. Hagenbeck thus represented the dilemma of

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[36] See for animal protection: Karel Davids, *Dieren en Nederlanders. Zeven eeuwen lief en leed* (Utrecht 1989). The national society grew out of a number of local ones, the first of which was set up in The Hague in 1864.

[37] Lothar Dietrich & Annelore Rieke-Müller, *Carl Hagenbeck 1844-1913. Tierhandel und Schaustellungen im Deutschen Kaiserreich* (Frankfurt am Main 1998).

[38] Matthias Gretzschel, Klaus Gille, Michael Zapf, *Hagenbeck. Ein zoologisches Paradies. Hundert Jahre Tierpark in Stellingen* (Hamburg 2007).

[39] Human shows were very popular at the time. They were exhibited in many places. See Patrick Allegart, Ben Sliggers (eds.) *De exotische mens. Andere culturen als amusement* (Tielt 2009)

the 20th-century zoo. The creation of a natural environment was not enough to attract a large audience. To do this additional elements of entertainment were necessary which, however, have to be measured in such a way that the zoo does not become a theme park.[40] It did indeed to some extent cut both ways with Hagenbeck, as it did with Heimans and Thijsse, in fact. Heimans, for example, in order for them to get to know living nature, took his students to the Sarphati-park in Amsterdam – in the eyes of modern-day nature purists a rather moribund city park.

The old entrance of Hagenbeck Hamburg 2008 (photo Anje Kooij)

The zoo without bars, as demonstrated for the first time by Hagenbeck, became the norm. Existing zoos had to adapt or they were doomed to disappear. Even in Hamburg, this was so. Since 1863 this is where the Zoologischer Garten Hamburg [Hamburg Zoological Gardens] had been situated. The first director was the systemist and encyclopaedia author, Alfred Brehm, who collected as many different species as possible. This principle lost out to the dioramas of fel-

[40] Even in most 19th-century zoos there were already discussions about whether the playground equipment which had been provided for children should not be removed, not least because of the amount of noise made by the children.

low Hamburger, Hagenbeck. The zoo closed in 1930.[41] In Munich's Hellabrun Hagenbeck's concept was adopted almost immediately and he was consulted during the planning of the zoos in Elberfeld and Neurenberg. In Rome too, where a zoo was set up in 1909, he acted as an advisor and in the 1920s his son Heinrich was involved in the construction of the zoos in Seattle, Detroit and Chicago.[42]

A typical Hagenbeck panorama, Hamburg 2008 (photo: Pim Kooij)

[41] In all fairness, it should be said that considerable war damage as well as excessive animal mortality played a part in this.
[42] Gretzschel, Gille, Zapf, *Hagenbeck*, 63.

In the Netherlands the architecture without bars was also widespread. The new zoos were all set up along these lines. These were Burgers Zoo, founded in 1913 in 's Heerenberg and which moved to Arnhem in 1923[43], Ouwehands Dierenpark in Rhenen which was created in 1932 from a poultry farm, the Noorder Dierenpark in Emmen dating from 1935, Dierenpark Wassenaar, which existed from 1937 to 1985 and took over the role of The Hague Zoo, and Dierenpark Amersfoort, which was set up in 1948 by former employees of Wassenaar Zoo. It is striking to note that these zoos were all set up by generally wealthy private individuals[44] and thus can clearly be recognised as a bourgeois echo of the royal menageries.

Tiger in Burgers Zoo, 1987 (photo Pim Kooij)

The established Dutch zoos also adopted the Hagenbeck concept. Artis created the Kerbert terrace for lions and the new Blijdorp by Van Ravesteyn was a faithful translation of the Hamburg example.

These *Freisichtanlagen* [unobstructed views] did indeed conjure up the suggestion of living nature, but that did not mean that Hagenbeck could be seen as a

[43] From 1932 to 1946 Burgers Zoo had a branch of sorts in Tilburg. In that final year it was transferred to new ownership and closed in 1973.

[44] Johan Burgers began a pheasantry behind his butcher's shop. Cornelis Ouwehand had a cigar factory for a while, just like his father, but later started breeding rabbits and chickens. Willem Oosting began the zoo in the garden of his wealthy parents' house in the centre of Emmen and Pieter Louwman of Wassenaar had a car dealership and also initially bred birds.

sort of Africa or Asia in miniature. There was too much showmanship for that, with his human exhibitions, an ostrich farm where feathers were harvested for ladies hats and even a touring circus. Furthermore, there were a great many other animals which were kept in cages, such as the apes, although a baboon rock was soon provided, which then appeared in almost every other zoo. But the greatest transgression was indeed the odd mix of animals. Hagenbeck became famous, among other things, for his trained animal acts in which different sorts of animals worked together, such as lions and tigers, or bears and dogs. This peaceful co-existence was also applied in his zoo. For example, his *Raubtierschlucht* [predatory] lions and tigers lived together, sometimes producing strange offspring, while on the ungulate field, ruminants from all over the world strolled around together.[45]

Ludwig Heck, the director of the Berlin zoo, therefore thought it was nonsense. He preferred a zoo based on sound academic principles and not the outward show that was aimed only at satisfying the public's desire for sensation.[46] Heck was actively involved in the protection of animals threatened with extinction, such as the European bison, of which there were only 24 remaining in 1924. But when he stepped down in 1931, his son Lutz who succeeded him, soon had concrete terraces built.[47] Hagenbeck, for that matter, also contributed to the conservation of rare animals. In 1925 he bought 25 Przewalski horses in Mongolia, of which there were almost none to be found in the wild anymore. From these animals, some of which were sold on to other zoos, a viable population was bred, part of which has been released into the wild again.

The self-image of zoos: a first reflection.

The conservation of rare animals was a new element. In the 19th century what zoos amounted to for rare animals was more a road to the museum, as happened to the last quagga, which had lived in Artis and was then stuffed and mounted in 1883. To determine when this aspect became a marketing element in zoos as a means of attracting the public, I undertook a small study of some 50 guidebooks for zoos in Germany, Belgium, France, the Netherlands and the United States covering the period 1925-2000.[48] These are the main findings:

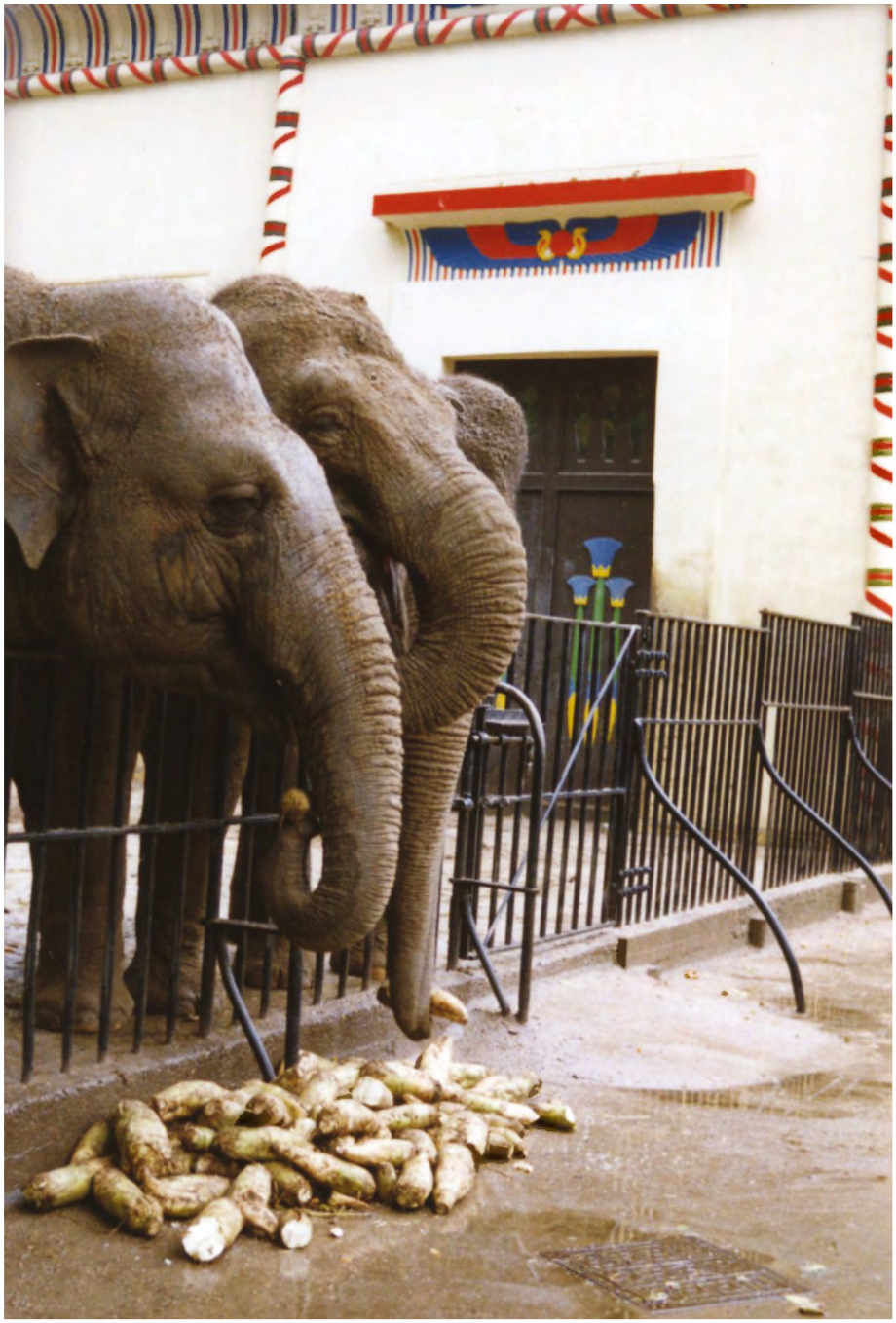
The guidebooks from the period between the wars mainly emphasise the variety of species and the spaciousness of the quarters. But while Hagenbeck draws attention to the terraces, the Berlin Zoo takes pride in its exotic-looking housing

[45] Carl Hagenbeck had intended to organise the park into geographical zones. For example, the Africa and Polar panoramas were completed during his lifetime: he died in 1913. Gretzschel, Gille, Zapf, *Hagenbeck*, 106. According to the Hagenbeck guidebook of 1938 that was the case 'only' since 1924.

[46] Gretzschel, Gille, Zapf, *Hagenbeck*, 102. This criticism dates from 1929.

[47] Lutz Heck was also active in the field of rare animals. Like his brother Heinz, director of Hellabrünn near Munich, he tried to breed back the aurochs, which led to Heck cattle that are now widely deployed in nature reserves as an extensive grazer.

[48] The older guidebooks I received as a gift from archaeologist Piet Kooi, whose father collected them. I am extremely grateful to him for this. The more recent ones I collected myself.



The Egyptian Temple in Antwerp Zoo 1992 (photo Pim Kooij)

which is suitable for the animals, as is the case with Antwerp too, where the large African animals are housed in a sort of Egyptian temple and in Artis the ungulates were kept in the Minangkabau house from Sumatra. London says it has the largest collection of animals and Berlin claims to offer a systematic overview.

After the Second World War, the German guidebooks were rather glum. Hagenbeck's zoo, as well as the Frankfurt, Münster and Berlin zoos were almost completely destroyed. In the 1950s, Berlin and Frankfurt started to compete with one another about which was the oldest and which has the most animals.[49] The Dutch Burgers and Ouwehand zoos also report enormous war damage.[50] Among these tales the presentation of the American zoo forms a positive contrast. San Diego, New York and Chicago are proud of their spacious housing and the wealth of species, the influence of Hagenbeck has clearly been felt here. The guidebook for the New York Zoo in Central Park opens in 1956 with a photo of the African savannah, which has been very realistically laid out, in which the lions have a constant view of the antelopes and zebras, and vice versa. Around this time, many zoos set up a children's zoo, in which suitable animals can be touched or seen at eye level. The American zoos too, advertise their wealth of species - San Diego has koala bears - and a large collections of apes, which is also the pride of Frankfurt, where there were already bonobos in 1956.[51]

In the 1960s and 70s the geographical context became the common theme, although there were also zoos which continued to work with predator houses and ape houses in which animals from different continents are placed side by side. In the early 1970s the Noorderdierenpark in Emmen reports in successive guidebooks a complete restyling with the Africa savannah as its highpoint. In other zoos too, savannahs and flight cages are reported. The example from London that in the period between the wars already used the Whipsnade site as a combined breeding centre and safari park, was copied elsewhere, such as in Belgium where the Planckendael estate became an annex to the Antwerp zoo in 1956. In addition, dedicated safari parks were created, as well as parks devoted to only one animal species, such as apes or sea mammals. All zoos present themselves in this period as guardians of rare animals. The Antwerp Zoo for example, which describes itself as a living museum, reports in 1970 the presence of okapis, white rhinos and European bison.[52]

In the 1980s and 90s the guidebooks provide a lot of information on the con-

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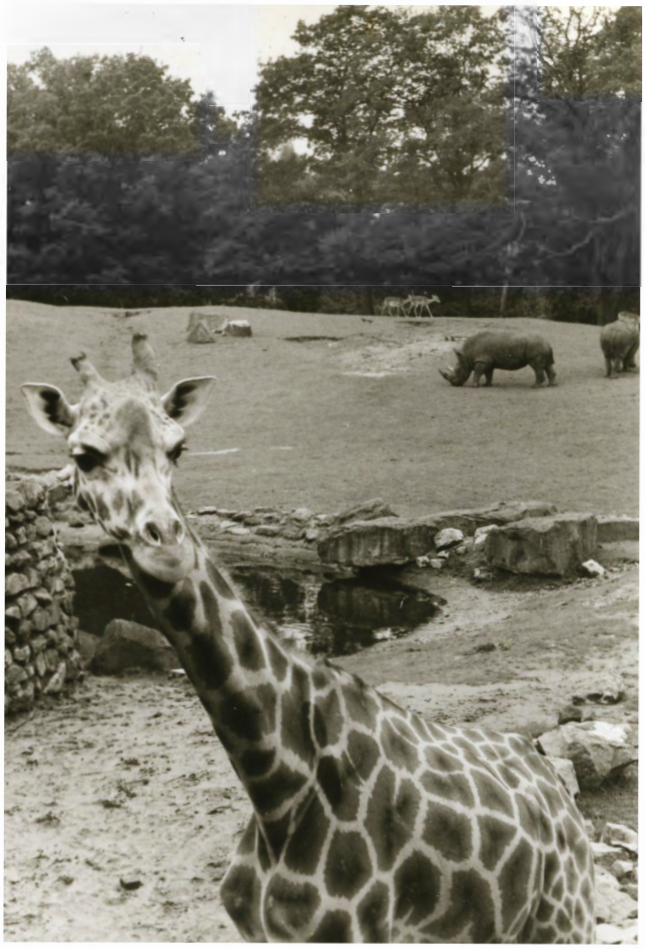
[49] In fact the Berlin Zoo dating from 1844 is the oldest, but Frankfurt, dating from 1858, describes itself as the oldest in the Federal Republic.

[50] Robert Jan de Boer, *Ouwehands. Een dierenpark in oorlogstijd* (Amsterdam 2004).

[51] München-Hellabrunn (guidebook 1955) is an exception. The director, Heck, primarily wanted to show the animals which everyone should know, and only afterwards the rare animals. He worked with geographical zones.

[52] The first Okapi had already been brought to Antwerp from the Congo in 1919. Baeten, *Roep van het Paradijs*, 182.



The Africa savannah in Emmen, 1980 (photo Pim Kooij)

servation of species. Here emphasis is put on the fact that the zoos have become increasingly self-sufficient, so that no more animals have to be caught in the wild.[53] The educational function for children is also emphasised. But first and foremost it is stated that zoos are fun. The piece about the history of zoos, which in previous decades the guidebooks opened with, is now at the back. The zoo is now extolled as an adventure park, where people can stand face to face with rare animals in a natural setting. This is very explicitly done by a number of American zoos and by the Dutch Burgers Zoo, which built a number of huge indoor climate zones, in which the suggestion of a rainforest or a desert is created. Many zoos also report the redesign of their aquaria, where people can effectively walk around among the fish and other sea life.

[53] In the period between the two world wars, even zoo directors had no scruples about shooting dead a rhinoceros mother in order to take her young: Lutz Heck, *Tiere. Mein Abenteuer* (Vienna 1952)

From menagerie to a perceptive experience

As the guidebooks clearly show, in the space of 100 years zoos had moved from being just menageries to a perceptive experience. In this way the dilemma that zoos have faced right from the outset has become even greater. On the one hand there is the academic ambition to preserve and study the wealth of species and to contribute to their conservation. On the other, there is the general public which seeks entertainment and is increasingly used to getting it, and the gap between the two is only getting wider. In the 1970s the public believed in the important role played by zoos in protecting animals threatened with extinction. The zoo as Noah's Ark was already a known metaphor reflected in the title of many a bestseller.[54] And they could also demonstrate the success of this function by pointing to the salvation of the European bison, the Pater Davids deer, the Przewalski horse, the Oryx, the Congo peacock, the Hawaii goose, the Bali starling, the condor and the Golden Lion Tamarin.[55] The rarity of animals appears to be less and less of a motive for most people to visit a zoo. In Berlin, Knut the cute polar bear cub managed to enthral more visitors than the grumpy giant panda a little further along.

This also has to do with the fact that living nature in the wild could now also be experienced in person. Safaris, expeditions through the rainforest, and even excursions to the Galapagos islands, have now surpassed the zoo panoramas. To be able to attract large numbers of visitors and at the same time be a credible partner in nature conservation, the zoos had to be resourceful. What by now had become plain was that a nature conservation role was difficult to combine with forms of entertainment that were once offered in zoos, such as a ride on an elephant or a camel. And feeding the animals was also no longer allowed. Even the animal feeding time shows became suspect, because of the animal training elements in them. Even the names had to be different. Familiar names for elephants such as Jumbo, Betsy and Coba became taboo. They were now called Mingalar Oo, Thong Tai or Htoo Kin Aye, names which are difficult to pronounce and therefore create more distance once more. Only the penguin parade in the Edinburgh zoo in which people and penguins walk around side by side has withstood the tide of criticism, but here the penguins appear to enjoy this even more than the visitors.

As an alternative to safaris and expeditions, under the nature-empathic approach, natural sensations were created in which entire biotopes were imitated. It is indeed a remarkable experience to stand on a little bridge in Burgers Bush and suddenly see two enormous manatees surfacing beneath your feet. But other

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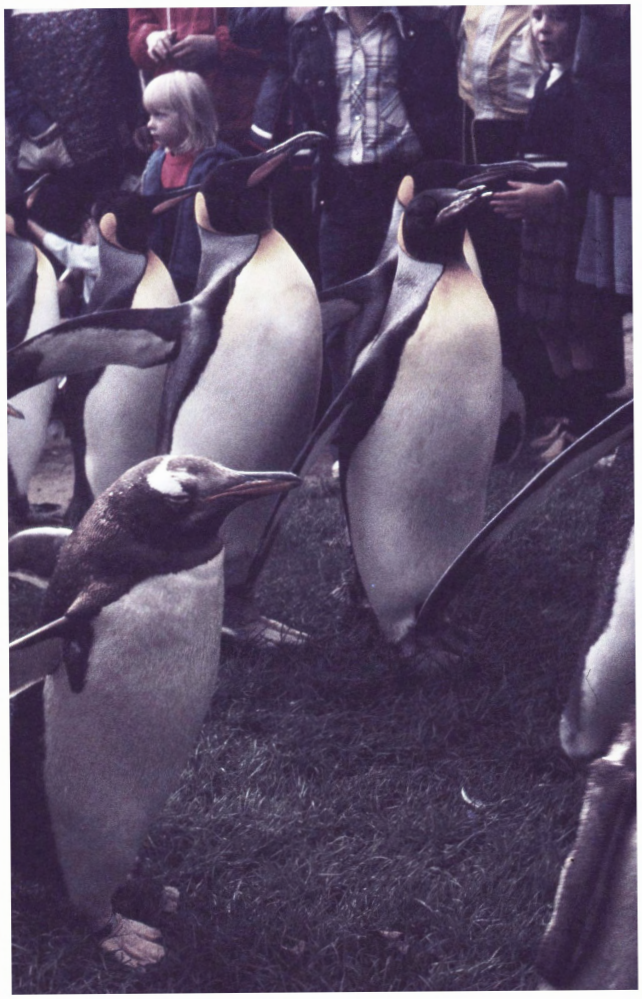
[54] A.C.V. van Bemmel, *Een moderne ark van Noach. De dierentuin als redding voor bedreigde diersoorten* (Amsterdam), Gerald Durrell, *Stationary Ark* (1976), Blunt, *The Ark in the Park*.

[55] Colin Tudge, *Last animals at the zoo. How mass extinction can be stopped* (Oxford 1992). An important element in this was the setting up of breeding registers. This was intended to promote pure breeding and prevent inbreeding. Because these were set up per animal and a different secretary was appointed for each register, this led to a lot of cooperation between zoos and to the movement of animals to places where new blood was needed.

than that, the animals should be left in peace and the excitement furnished elsewhere, beyond them. This leads in the first place to enormous playgrounds. In Emmen they take this even further - there a new zoo is being built around a large theatre, actually a 19th-century concept in a modern form. In anticipation of this a large Chinese light show was set up in 2009 which the giraffes and rhinoceroses on the Africa savannah did find rather odd. This would appear to be one side of the spectrum. On the other side is Gerald Durrell's zoo on Jersey which is entirely dedicated to the conservation of threatened animal species, with training programmes and a summer school for future animal conservationists.[56]



The penguin parade in Edinburgh Zoo 1978 (photo Pim Kooij)

[56] Durrell, *Stationary Ark*. With his many popular and appealing books, including *My family and other animals*, Durrell, who started out as an animal trapper, managed to reach an audience of millions which created a lot of goodwill for his Jersey wildlife preservation trust.

These sorts of dilemmas have been major topics at conferences held in recent years on the future of zoos. The volumes published in connection with the 250th anniversary of the Vienna Tiergarten Schönbrunn and a conference in London in 2004 would seem to me to be representative examples.[57] Here the professionals speak, who see the zoo of the 21st century first and foremost as an instrument for the conservation and breeding of threatened animal species. The public, of course, must also support that, which won't be achieved with playgrounds. Education is the magic word. That was what it was all about right from the outset under the nature-empathic view. But the first animal conservationists focused mainly on those people who were already open to this. Now the general public has to be addressed and specifically with the intention of bringing about a change of attitude and the development of certain values.[58] Unfortunately, the few impact measurements that there have been show that visitors are difficult to influence – it is with children that they succeed best.[59]

Most experts are in agreement that the zoos alone will never manage to bring a threatened population out of the danger zone. There have been a few success stories, such as the Oryx which has been released into the wild again in Oman, the Brazilian Golden Lion Tamarin and the Californian condor, but these are the exceptions. One of the great benefits of zoos is that the animals no longer have to hunt or forage, so that they only need a much smaller habitat, which is more often extended than reduced. What appears to be most successful are the joint ventures between wildlife reserves in situ and zoos. The cooperative ties between the Bronx Zoo in New York and the Congo are exemplary. In the *Congo gorilla forest* in the zoo, money is collected for the protection of the gorillas in their natural habitat. There is a similar association between the Zurich Zoo and the Masoala Park in the north of Madagascar.[60] The zoo architecture plays a vital role in this. In both cases the original habitat is copied, which provides an impetus for the public to make an emotional and financial commitment. This is also the case with the orang-utan quarters in the Frankfurt and Munich zoos, which have ties with the Bukit-Tigapuluh park on Sumatra. But the most spectacular orang-utan housing is in Hagenbeck's, a sort of spaceship with a typical primeval jungle biotope, where separated from one another in a natural way, yet still close

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[57] Ash, *Mensch, Tier und Zoo*, Alexandra Zimmermann, Matthew Hatchwell, Lesley A. Dickie, Chris West (eds.) *Zoos in the 21st century. Catalysts for conservation* (Cambridge 2007).

[58] Eleanor Sterling, Jimin Lee, and Tom Wood, 'Conservation education in zoos: an emphasis on behavioral change', in Zimmermann, Hatchwell, Dickie, West, *Zoos in the 21st century*, 37-51. In the Netherlands there has been an education tradition since the period between the wars, particularly with the radio talks by A.F.J. Portielje, who also put together five popular Verkade albums on Artis. On TV more and less cuddly animals were presented by Han Rensenbrink of Artis and Willem Duys together with Aleid Renssen from the zoo in Emmen. The director of Burgers Zoo, Anton van Hooff, also regularly appeared on television, as did Hanneke Louwman of Wassenaar Zoo. Empathy played an important role in these programmes.

[59] Richard P. Reading and Brian J. Miller, 'Attitudes and attitude change among zoo visitors', in Zimmermann, Hatchwell, Dickie, West, *Zoos in the 21st century*, 63-92.

[60] Matthew Hatchwell and Alex Rübel, 'The Masoala rainforest: a model partnership in support of in situ conservation in Madagascar', in Zimmermann, Hatchwell, Dickie, West, *Zoos in the 21st century*, 205-220.

to each other, an orang-utan family and human families happily potter around.

It is interesting to note how few references are made to Dutch zoos in international fora. I did not come across them at all in the volumes to which I referred. And yet Artis and Blijdorp play a central role in a number of breeding programmes, and with advanced architecture on a relatively small site Emmen has for some time created a huge amount of space for itself, while in 1988 the Burgers Zoo already presented the zoo of the 21st century with impressive perceptive experiences. Burgers Zoo also showed that zoos can support animal-keeping in ways other than just financial. Here, for example, research was done by Frans de Waal and others from 1971 on the social hierarchy of chimpanzees and how this is maintained. This turned out to be of great importance when approaching groups in the wild. The behaviour of zebras and wolves was also studied.

The urban wilderness

Some zoos were, right from the start, located in city centres, often close to a station, as in Antwerp, Berlin and Emmen and initially in Rotterdam. They were also sometimes established in a park, as in London or Rome. Other zoos were specifically built away from the city because there was space and the land could be bought cheaply. This was the case with Hagenbeck's and Blijdorp, for example. But over the course of time, these zoos too became enclosed by the urban sprawl so that they are now more or less in the centre. In this way, both sorts of zoos have come to resemble each other. Initially, the central zoos were mainly an urban meeting place, while the decentralized zoos offered more in the way of relaxation, the purpose of a day trip. But in the meantime most have become city parks, albeit exotically furnished city parks, but hardly something strange. Even in the ordinary city parks there is plenty of exotic flora and fauna to be found; for example, some parks are full of screeching 'parrots', escaped ring-necked parakeets, while in zoos a sort of concrete encroachment has taken place, which in turn makes them very urban. The Riviera hall in Blijdorp in Rotterdam, for example, has been used for years as an examinations hall by the university, for bridge drives, trade fairs and other events because there was no other large hall available.

That the contrast is not that great is also shown by the fact that zoos in the city can disappear. The South Holland Provincial Government Building now stands where The Hague Zoo once was. The old zoo in Rotterdam has also completely disappeared. And no one anymore can see that the city park in Hamburg was once Brehm's Zoo. Perhaps the wilderness that the zoo offers and the urban wilderness are a match for one another.

The term 'urban wilderness' was used in 1972 as the title of a book by the American urban historian Sam Bass Warner.[61] Large cities appeared to him to be

[61] S.B. Warner, *The urban wilderness* (New York 1972).

like a wilderness, in which he found it difficult to find his way. The book describes an attempt to apply some sort of system to this wilderness by identifying the ordering mechanisms. That led him to write an urban history of the United States which, among other things, looked at planning, economic development, social structures and changes in structures, migration and the development of the economic and social infrastructure. He does not mention zoos in this book, but they must have occurred to him as examples of order and regularity in this urban jungle, through a gate carefully drawn back, full of signposts and route descriptions and with a fixed content which is neatly kept in place by means of all sorts of clever devices.

This experience of the urban wilderness had already been chronicled long before Warner did so. Already since the end of the 19th century references have been made to this urban wilderness.[62] The city landscape was seen as a version of the wild, natural landscape. Smoking chimneys and factory sounds were compared with the din of wild animals and the new trams were seen as a wild animal which chased through the streets roaring and raging, just like a tiger. In such visions zoos were indeed often referred to as oases, where the wilderness was presented as manageable, domesticated or somewhat approachable. At the same time, however, the zoos offered wild vistas, which people knew to be hidden behind what was presented. According to Christina Wessely, it is the interchange between nature and culture, the strange and the familiar, wildness and control, which has made the zoo such an enduring success.[63] It has now also become sufficiently clear that the ratio between these elements in terms of their nature and extent has constantly varied over time.

Any decent city has a zoo. And any decent zoo has tigers. So we know that in any city of substance, there are tigers walking around. It does not disturb us. They are part of a big city. Just like the tram.

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[62] Christina Wessely, 'Lesarten des Natürlichen. Tiergärten und urbaner Raum in Vergleich', in Ash, *Mensch, Tier und Zoo*, 133–151.
[63] See note 62.

Curriculum vitae Pim Kooij

11-06-1945	Born in Dordrecht
1951-1960	Primary school and gymnasium in Dordrecht
1960	Move to Harlingen
1960-1963	Gymnasium B in Leeuwarden
11-06-1963	Gymnasium B graduation
1963-1970	History at the University of Groningen, majoring in Economic and Social History. Minors in Medieval Latin, Sociology, Early Modern History, Modern History
1969-1970	Student assistant in Economic and Social History, Faculty of Economics
09-07-1970	Graduation in Economic and Social History
01-08-1970	Researcher at the Institute for Economic Research, Faculty of Economics
1970-1972	Part-time teaching position at the Social Academy, Groningen
18-09-1970	Marriage to history teacher Anje Bakker (*1972 Mathijs, *1976 Xandra)
01-10-1973	Lecturer in Economic and Social History
01-04-1978	Senior lecturer in Economic and Social History (*wetenschappelijk hoofdmedewerker*)
1979-2009	Member of the Privacy Committee, University of Groningen
1979-1987	Editor of the *Tijdschrift voor Sociale Geschiedenis*
1984-1992	Member and later chair of the Economic and Social History Committee of the Dutch Foundation for Historical Research
01-11-1985	Associate professor in Economic and Social History (*universitair hoofddocent*)

09-10-1986	PhD in Economic Science. Dissertation: *Groningen 1870-1914 Social change and economic development in a regional centre* (Supervised by Prof. Han Baudet)
1987-1991	In charge of the NWO Integral History project (together with Dr G. Trienekens, University of Utrecht)
1987-2009	Fellow of the N.W. Posthumus Research School in Economic and Social History
1988	Elected member of the Dutch Society for Literature
07-11-1988	Appointment as professor at the University of Groningen in the Economic and Social History of Town and Countryside (of the Northeast of the Netherlands in particular) by the Foundation for Higher Agricultural Education. Faculty of Economics
1988-1994	Member of the Board of the Dutch Association for History (KNHG)
1989-1999	Member of the board of the 28 August Debate Foundation
1991	Beginning of collaboration with Russian researchers (Moscow, Yaroslavl, Tambov) on regional development before 1917. Funding by the Netherlands Organisation for Scientific Research (NWO)
1993	Member of the board of the Schuurman Schimmel-van Outeren Foundation in Haarlem
1994-1996	Member of the board of the Institute for Dutch History (ING) in The Hague
1995-2008	Member of the History of the University of Groningen committee
1995	Elected member of the Commission Internationale pour l'Histoire des Villes
1995	Member of the board of the Dutch Society for Urban History
1995-1998	Member of the board of the Verhildersum Museum Foundation (Leens)
1996-2003	Chairman of the Institute for Dutch History in The Hague

1996–2008	Secretary of the European Association for Urban History
1996–2004	Second stage of the collaboration with Russian historians (Moscow, St Petersburg, Yaroslavl, Tambov) on regional development before 1917. Funding by NWO
01-01-1997	Transfer from the Faculty of Economics of the University of Groningen to the Faculty of Arts
1997	Elected member of the 'Hollandsche Maatschappij der Wetenschappen' (Royal Holland Society of Sciences and Humanities)
1997	Member of the board for the annual Dutch-Flemish Conference
01-01-1998	Professor in Economic and Social History (50%) at theUniversity of Groningen, Faculty of Arts. Professor in Agricultural History (50%) at Wageningen University, Social Sciences Group. Managing director of the Netherlands Agricultural Historical Institute in Groningen and Wageningen. Chief editor of *Historia Agriculturae*
1998–2009	Member of the board of the N.W. Posthumus Institute (2004 Chair of the Examination Committee)
1998	Member of the board of the H.S. Kamminga Foundation, Groningen
1999	Participant in CORN, Comparative Rural History of the North Sea Area
2000	Member of the board of the Higher Agricultural Education Association (2006 secretary-treasurer)
2001	Member of the Scientific Advisory Board of the Fryske Akademy, Leeuwarden
2000–2008	Chairman of the Association for Rural History
2002–2009	Member of the Commission for History, Art History and Archaeology of the Flemish Organisation for Scientific Research (FWO)
2006	Member of the editorial board of the *Stadsgeschiedenis* journal (Antwerp)
2007	Royal Decoration for contributions to science and society (*Officier in de Orde van Oranje-Nassau*)

2007	Member of the Advisory Board of the Groningen University Fund (GUF)
2009	Member of the board of the Northern Maritime Museum.
	Also member of several jurys (Van Winter Award, Keuning Award, Eekhof Award, N.G. Addens Award, Wolters Noordhoff Award, Veegens Award); advisor to several institutions and companies concerning their history (University Hospital Groningen, PTT, NOG insurance, RABO bank, LTO, Landbouwschap, Groeneveld)

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