PLACE-MAKING WITH AVENUE SYSTEMS, A DUTCH DESIGN TRADITION

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From the sixteenth century on the Dutch landscape has been transformed by the building of country residences called estates and their expansions with gardens and parks. These rural properties were surrounded by impressive avenue systems that (re-)ordered the waste landscape and made remote regions more accessible. Several Dutch avenue systems have remarkable layouts that are comparable with famous palaces like Hampton Court (Great Britain) or Versailles (France). The Dutch castles were owned by members of the Court or their political advisers, who used them as hunting estates. As the geometrical avenue systems expressed political power, they were extended over centuries, regardless of changes in garden fashion. The impressive avenue designs according to classic Italian design principles were initiated by the estate owners themselves. Especially members of the Dutch Court propagated their ideas to connect the avenue systems of the castles with new built churches and village expansions. This laying out of avenues was a new kind of urbanisation and a starting point for the classic Dutch landscape tradition that inspired many estate owners. Some of these early examples of 'place-making' are still recognisable as main structures in Dutch cities and landscape and express a well-structured place.

INTRODUCTION

From the sixteenth century on the Dutch landscape has been transformed by the expansion of country residences with avenue systems around castles, palaces or large mansions. The houses represented the status of their owners in which three categories are distinguished; wealthy merchants, the nobility and members of the Dutch Court. According to a building manual from 1681, their estates expressed their social status. Merchants used their properties as a quiet country retreat, the nobility did not glorify their status, but Court members however did express their position to emphasise their prestige in the architecture of their estates.[1] At the time, estates consisted of an ensemble of a house, a garden and surrounding lands. Except for a country residence, estates were intended as an investment in agricultural lands and for hunting purposes.[2] These rural properties were surrounded by impressive geometrical avenue systems that (re)ordered the landscape and made remote regions more accessible.

Several avenue systems, such as the ones at palace Het Loo (Apeldoorn), castle Renswoude or castle Rosendael have remarkable layouts that are comparable with famous foreign palaces like Hampton Court (Great Britain) or Versailles (France).[3] Enjoying the 'most delightful, (...) advantageous, (...) healthiest and (...) blessed [country] life' confirmed the free status of the nobility being not bound to the town by their profession.[4] When the economic situation improved in the early seventeenth century Dutch merchants became the third important group of estate owners.[5] The merchants commissioned architects to build modern new country houses, unlike the nobility who in general re-used or improved old medieval castles and palaces to expressing their noble backgrounds.[6]

There was a desire and need to organize the uncultivated landscape into good order by the laws of art and architecture. The design of nature was seen as an act of science. As Jan van der Groen, head Gardner of the Stadholder Willem III described; the outdoor areas were imperfect.[7] Many land surveyors played an important part in the layout of Dutch gardens combining horticulture, surveying and mathematics as design principles. Geometry and uniformity were used to lay out avenue systems that expressed political power. However estate owners, in particular Dutch Court members, developed plans themselves to protect and enlarge their open spaces. For centuries, they were planted and extended at their hunting estates, regardless of changes in garden fashion. The avenue system at palace Het Loo for example shows several stages of extensions, even into the early twentieth century. The impressive avenue designs were undertaken by the Court members themselves; the stadholders, kings and queens, who were inspired by classic Italian design principles and propagated a pragmatic manner of applying these principles.[8] Their ideas were put into drawings by land surveyors, while the head gardeners executed the details in the terrain.

The grand architectural organization of the ground plan derived partly from a land distribution system stemming from the late medieval times.[9] With the avenue systems they connected their castles to new build churches and village expansions. The typical first step in the planning of these ensembles was the planting of trees, that had to be kept well to maintain the structure.[10] The laying out of these avenues can be considered as examples of early Dutch place-making; a new kind of urbanisation as a starting point for the classic Dutch landscape design tradition that inspired many (foreign) estate owners. Most of these early examples of 'place-making' are still recognisable as main structures in Dutch cities and landscapes.

According to several authors place-making contains cultural activities that renders unique communities through creative designs that possess the potential to influence an urban environment profoundly. Place-making was often part of a private economic development that reflects the specificity of the place, culture, history or community. This capital investment is recognised as a simple desire for profit and speculative gain. History, memory and connections to the landscape are part of a social grid that is invariably woven in good part by flows of capital. Yet the intertwining of the two is omnipresent.[11]

This paper describes a new understanding for avenue systems, why they were made and what they expressed. It explores place-making with avenue-systems as an Dutch architectural urban planning strategy that was actively deployed from the sixteenth century on. Several authors distinguish the fact that the planting of avenues was intended for display and decoration of estate properties, and was a costly investment that could be, according to the owners attitude, for all kinds of economic and domestic purposes. As was expressed in a travel journal in 1695: 'The Dutch are great Improvers of Land, and Planters of Trees, of Ornament as well as Profit'.[12] Just a few authors described the design principles of avenues systems. The publications *Architecture and Landscape*[13] and *The Villa and the Landscape*[14] analysed German, Italian, French and English estates and the role avenues played in their layout as place-making attributes. Although *Courtly Gardens in Holland 1600-1650*[15] is a thoroughly analyse of Dutch garden design it appointed insufficient the importance of avenue-systems at Dutch estates in their surrounding landscape or recognised it as a urban planning strategy. *The Dutch Garden in the Seventeenth Century*[16] doesn't describe any relation between avenues with urban planning or place-making. There is a clear knowledge gap on this matter. Edmond Bacons *Design of Cities*[17] (1967) however is an important exception and compares the ancient Greek urban spatial system with the straight sightlines realised as avenues in the city of Rome that inspired the urban planning of so many European and American cities. He even compares three small Dutch cities (Culemborg, Zaltbommel and Wijk-bij-Duurstede) and their symbolic nodes with Roman principles. Interesting is his comparison of space used at some estates by projecting them on city plans. Nevertheless his discourse doesn't describe how space was made by the lay-out of avenues around Dutch estates and the role they take in an international context is missing.

The urban planning strategy of Dutch estate owners during the stadholders period (1550-1800) will be stated in this paper by showing several examples of place-making with avenues. At first the application of classic design principles to express political power with urban expansions will be described. Secondly three examples of urban planning along goose foot avenues (palace Het Loo, castle Renswoude and castle Rosendael) will be explained. This approach shows the specific marking of Dutch place-making with avenue systems on bases of ownerships of the estates by comparing two categories; Court members and nobility. Explaining the knowledge gap can enhance the meaning of Dutch urban planning with avenues systems in an European design context.

DUTCH FOUNDING FATHERS

The typical Dutch tradition of place-making started in the fourteenth century, when cities were realised by individual landowners using their possibilities of borderland. For economic reasons these new cities were situated next to castles and along trading routes.[18] Under the rule of bishops or dukes new cities arose along rivers to become economic and political power centres.[19] From the seventeenth century wealthy merchants, citizens and the nobility fled crowded, noisy and unhealthy cities, and built country estates for a summer retreat. The explosive increase in estate possession reached its peak in the second half of the seventeenth century and persisted until the nineteenth century.[20] During this period of growth we also notice an expansion of straight lined avenue systems around estates.

The design of avenue systems in the Low Countries was based upon a long tradition that had been started by Dutch stadholders in the sixteenth century when hunting rights only were preserved for the Court members.[21] In their designs, the stadholders applied classical Italian architectural rules and military science to the arrangement of their hunting grounds. Long straight roads, suitable for their beloved 'parforce' hunt, were surrounded by double rows of trees on each side.[22] The specific way of planting in '*quinconce*', applied into the geographical situation by the laws of perspective, gave the user a great perspective on the landscape.[23] According to Florence Hopper this planning practice was conceived by four important men: Prince Frederik Hendrik of Oranje Nassau (1584-1647), captain general and admiral of the Republic of the Seven United Netherlands and stadholder of five of the seven provinces; stadholder prince Maurits of Oranje Nassau (1567-1625), the older half-brother of

Frederik Hendrik; Jacques de Gheyn II (1565-1629), one of the most influential engravers at the time, and the mathematician and engineer Simon Stevin (1548-1620). In 1594 Stevin adapted the layout of Italian ideal towns for Dutch town planning and recorded his rules in Vande oirdeningh der Steden. The rectangular plan he created was used as an important reference for the development of Dutch fortified towns. According to Florence Hopper these basic principles were applied for the first time to gardens and parks by stadholder Frederik Hendrik at palace Honselaarsdijk in 1621 and described by the garden designer André Mollet in 1651 in his book Le Jardin de Plaisir after he had visited it in 1633, eight years after its construction.24 The laws of perspective was introduced and applied by engravers and engineers in the designs of parks by the Dutch Court members and only later by garden designers.

THEORIES AND IDEAL GEOMETRIC FIGURES

Dutch gardens consisted of a large number of internally ordered architectural forms based on simple geometric shapes. All parts of the garden were related to each other and to their natural setting. The man-made forms expressed the harmony between man and nature. The Roman architect Vitruvius (ca. 85-20 B.C.) and the Italian architect Leon Battista Alberti (1404-1472) based their theory of ideal architecture proportions on the principles that they deduced from the proportions and symmetry of the human body. This so called Vitruvian man can be shaped into four ideal geometric figures; circle, triangle, rectangle and cross.25

Except for ideal proportions and forms, in his architectural treatise *De re aedificatoria* (1452) Alberti described the perfect location for a villa. Its position should enable a view of hills, plains and a town and should express the social and economic status of its owner.26 In 1570 the Italian architect Andrea Palladio (1508-1580) summarized his thirty years practice in guidelines for classical architecture, in the treatise *I Quattro Libri dell' Architectura*. He also gave criteria for an ideal villa location.27 Villas should be situated in the middle of their fields, close to a navigable river - for access to running water -, next to regional roads, on a prominent spot - to be visible from all sides - and if possible on the top of a hill or elevated terrain. The villa site should be demarcated and separated from the surrounding fields and farmlands by low walls or avenue trees, to make the size of the grounds clearly visible from the outside. Palladio emphasized the need for good infrastructure. He thought that roads should be built for military use like the Romans did: following the mathematical laws of universal order. If possible they should be realised as perfectly straight, continuous lines, so one could look far ahead and enjoy beautiful perspectives of the landscape. After having stated these rules he recommended that these roads would be more attractive and comfortable when planted with trees on both sides, to cheer the traveller with their leaves, and provide shadow.28 Intersecting access roads and visual axes not only connected villa's with the surrounding landscape but also connected them with new built churches and urban planning expansions in the villages to symbolize the landowners political power.

As the Dutch stadholders studied these classic Italian principles they used them not only in the lay-out of their fortified cities, but also in the lay-out of park designs.29 The straight line, as a path, avenue or road, whether or not edged with trees, is a constant element in the ideal landscape that was created around the Dutch country manor. From then on the characteristic avenue systems were frequently copied at country seats of the stadholders and their circle of friends. Except for aesthetic reasons, avenues were planted for protection against the harsh and windy Dutch climate. They marked the owners property as a seventeenth century 'skyline' in the uncultivated and open landscape and generated a regular income through wood sales. Practical benefits, economic profit and architectural beauty in ideal geometric figures were simply combined in the lower countries in a typical 'Dutch Way' with the planting of avenue-systems.

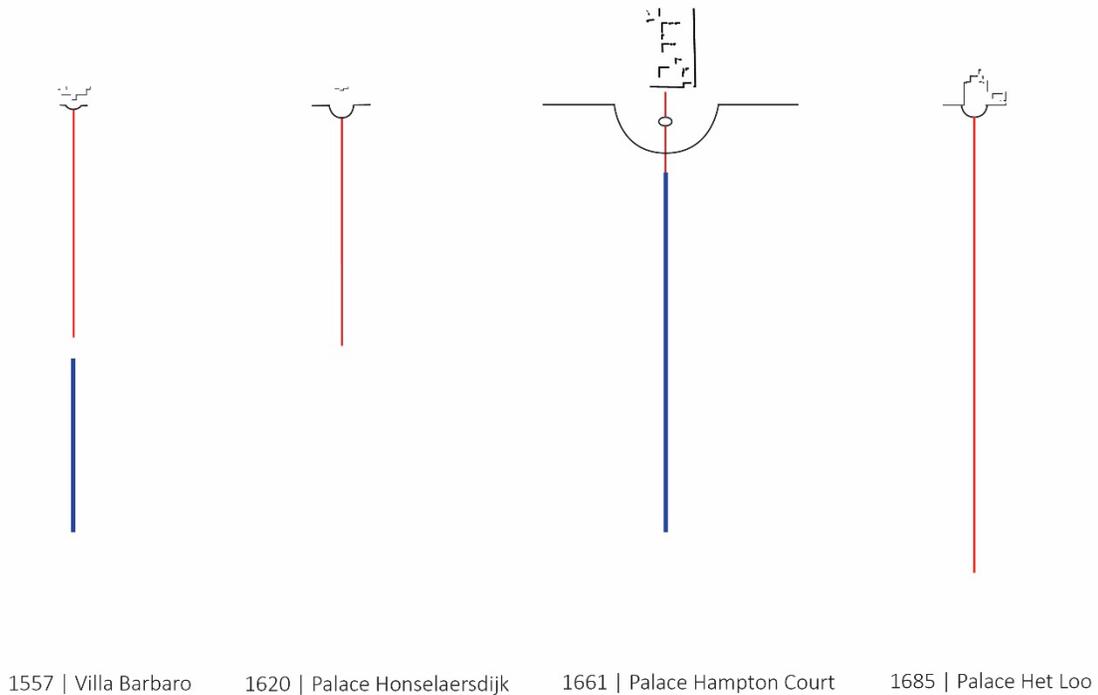1557 | Villa Barbaro   1620 | Palace Honselaersdijk   1661 | Palace Hampton Court   1685 | Palace Het Loo

FIGURE 1 Comparison of schemes of sightlines (red = avenues, blue = Grand Canals) with the exedra's or half round squares (black = exedra with palace). The length and execution is striking; the 800 metres long avenue of Palace Honselaarsdijk is as long as the avenue sightline of villa Barbaro. The complete 1.650 metres long sightline, consisting of an avenue and a canal, of villa Barbaro is almost of the same length as the canal at Palace Hampton Court or the avenue at Palace Het Loo. [drawing Debie & Verkuijl]

EXPRESSION OF POWER: URBAN PLANNING ALONG SIGHTLINES

Debie & Verkuijls study of avenues (executed in 2012) shows that the avenue systems were part of a geometric system that were formed by the ideal geometric figures; circle, triangle, rectangle and cross.[30] The figures formed ideal sightlines or visual axis to give perspective on features they connected. In the Dutch avenue designs urban planning became an important design element which will be explained hereafter.

The Dutch Stadholder-King Willem III (1650-1702) built sightlines in front of Hampton Court palace in London (1661) and at palace Het Loo in Apeldoorn (1685) starting from an exedra, a half round square. These 800 metres long sightlines might have been inspired by his ancestor, stadholder Frederik Hendrik, who extended his palace Honselaersdijk in Rijswijk with a sightline and exedra between 1620-1625. The avenues were planted with two rows of oak trees on each side.[31] Willem III accentuated the sightline at Hampton Court with a Grand Canal, that might have been inspired by the Palladian villa Barbaro (1557) in Maser. This 750 metres Palladian sightline was extended with a Grand Canal to an impressive length of 1.650 metres.[32] (see fig. 1)

Initially sightlines to position new palaces in the landscape, formed a cross with the access road that ran perpendicular on it. The palaces of court members were situated conveniently in the landscape, using occupation patterns or existing landscape elements like hills to situate them and being connected with the straight avenues. One would approach the castle from aside, not from the front, which is often proclaimed to prevent access roads blocking the sightline. The sightline in front of palace Het Loo for example is only used as the main entrance road since 1807, on behalf of King Lodewijk Napoleon. Its paving was one of the improvements he made for the main roads around the palace to be accessible for the French army.[33]
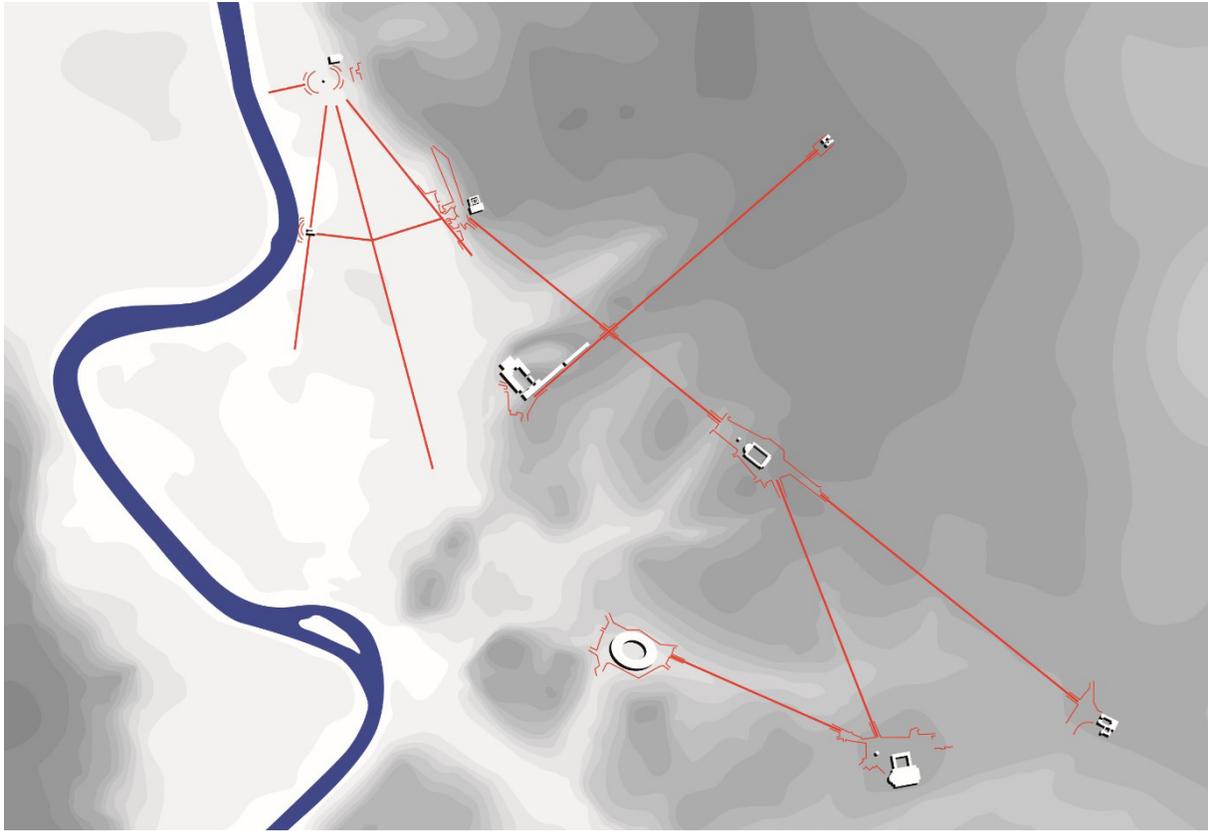
FIGURE 2   Scheme of the design concept that Pope Sixtus V (1558-1590) in 1585 introduced in the city of Rome connecting straight sightlines from churches with squares and obelisks with the seven hills of the city. [drawing based on several maps of Edmund Bacon, Design of cities. New York, 1967 adapted by Debie & Verkuijl]

Connecting palaces with natural elements like hills was a design concept implemented in 1585 in the city of Rome by Pope Sixtus V (1558-1590). He had the seven hills of the city connected with various landmarks like churches and obelisks by straight roads.[34] (see fig. 2) The Dutch stadholders imitated this ordering principle in sightlines of straight avenues that ran from their palaces towards hills in the landscape and situating obelisks on them. To express the status of the monarchs these sightlines were often part of a goose foot. Therefore it is interesting to compare several goose foots. Although Versailles (1664) is well known of its greatness and grandeur and Hampton Court (1708) is extended splendidly in a triangle and a Grand Canal, Het Loo (1685-1691) shows an exceptional position by placing its goose foot 800 metres on distance of the palace. Although Het Loo is usually described as a rather small hunting estate we can recognise a kind of competition between the French and Dutch monarchs in this lay-out comparison. (see fig. 3)

The application of a goose foot was for the first time made by Palladio at villa Pisani Bonetti in Bagnolo (1569).[35] It formed an ensemble with a church, several houses and the villa on the other side of the river Gua and had a sightline that reached out to the hills in the distance. This kind of urban planning with a goose foot consisting of straight roads can also be demonstrated with three Dutch avenue examples that not only connected palaces with churches but also with new housing as will be explained in the following text.
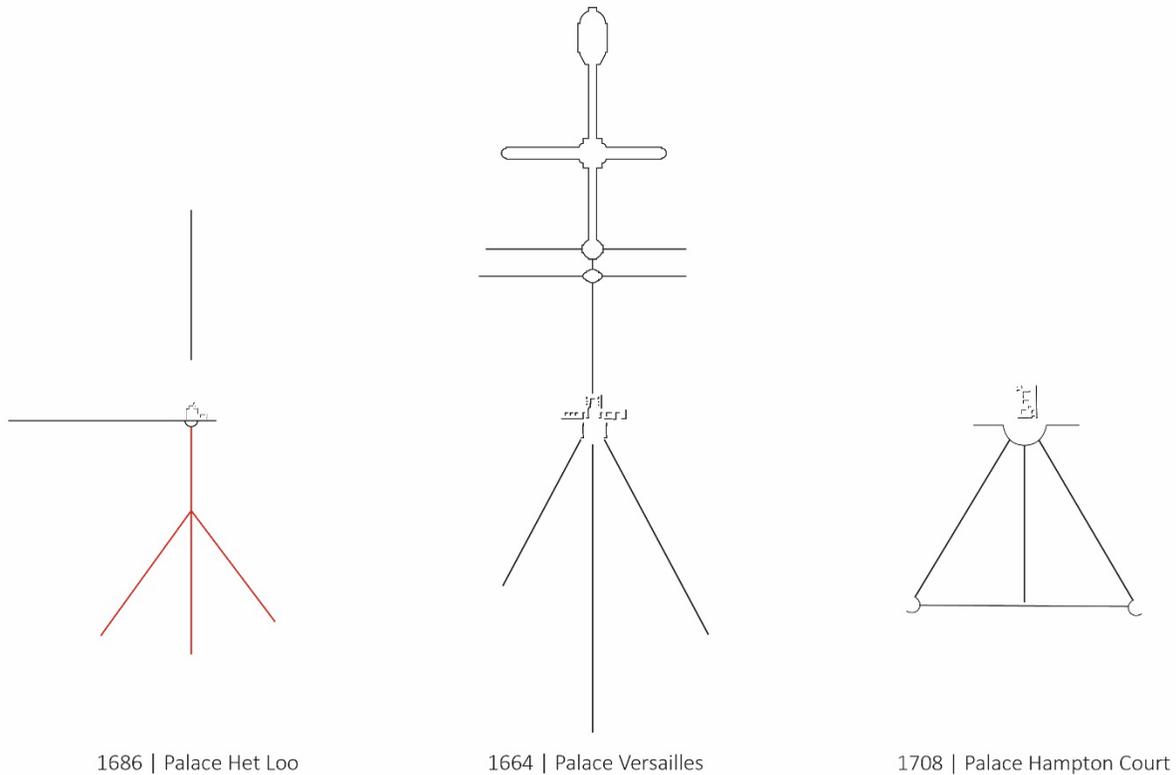
1686 | Palace Het Loo   1664 | Palace Versailles   1708 | Palace Hampton Court

FIGURE 3 Schemes to compare size and position of three goose foots. In red the exceptional goose foot of Palace Het Loo that is positioned on 800 metres distance from the palace and forms a sightline of 1.600 metres long. Interesting fact is that the left toe of Het Loo (Jachtlaan = 1,5 kilometres) is a little longer as the left toe of Versailles (Avenue Nepveu Sud = 1 kilometre). [drawing Debie & Verkuijl]

The first example of a goose foot described here was built in 1686 at palace Het Loo by stadholder Prince Willem III. It connected the palace with the existing medieval church *Oude Kerk* of the village Apeldoorn. Het Loo's second goose foot was built in 1808 in front of the palace by the French King Lodewijk Napoleon. It connected the palace with a new urban expansions called de *Nieuwe Haven* with an exedra that was twice as large as the exedra in front of the palace. The *Nieuwe Haven* consisted of a bloc of 24 small terraced houses, a large guesthouse and a market square with two detached new churches which were planned as counterpart of the former *Provenierswoningen Oude Haven*.[36] Between 1907 and 1912 a third reversed goosefoot was realised by Queen Wilhelmina to complete a diamond shape avenue system and connected it with her new build church, the *Grote Kerk*.[37] The extensions of this complex avenue system made since then settling in the neighbourhood of the palace Apeldoorn popular for wealthy retirees, former Dutch East Indies and industrialists. In spite of the involvement of several landscape architects who made drawings for these extensions, the stadholders, kings and queen preferred their own design for the avenue system at Het Loo.[38] This complex avenue system, that consisted of ideal geometric figures (triangle, rectangle and cross) became an important structure for the urban development of Apeldoorn in the twentieth century, and expressed the power of the involved monarchs. (see fig. 4)

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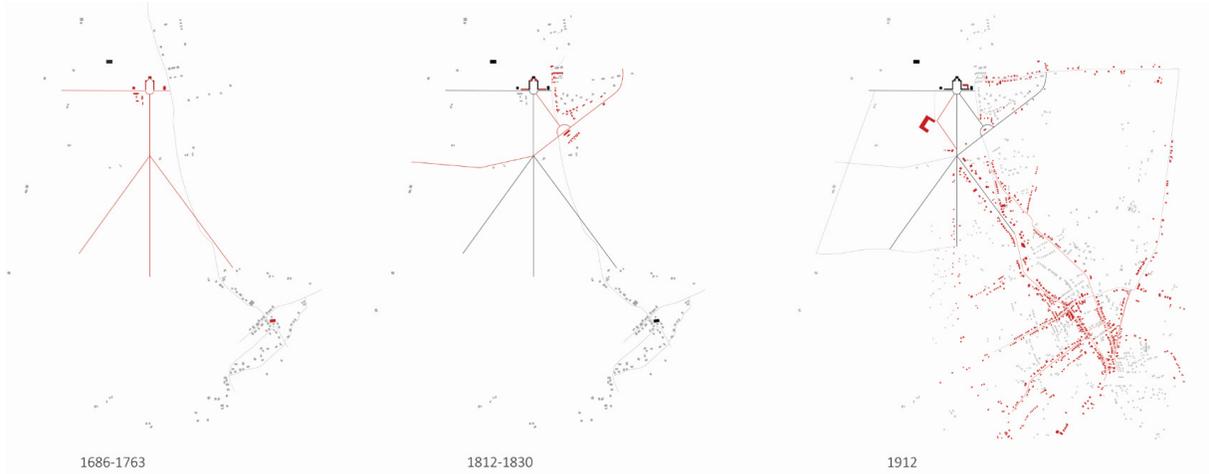
1686-1763   1812-1830   1912

FIGURE 4   Schemes of urban planning along sightlines being part of the extensions of several goose foots over three periods, initiated by the monarchs of palace Het Loo. (red = new avenues and new buildings; grey = existing elements; black = important existing elements like palaces, castles or churches). The sightlines connected the palace with different new build churches and even an obelisk, in the same manner as Pope Sixtus V did in 1585 when he applied this urban design principle to the city Rome. [drawings Debie & Verkuijl]

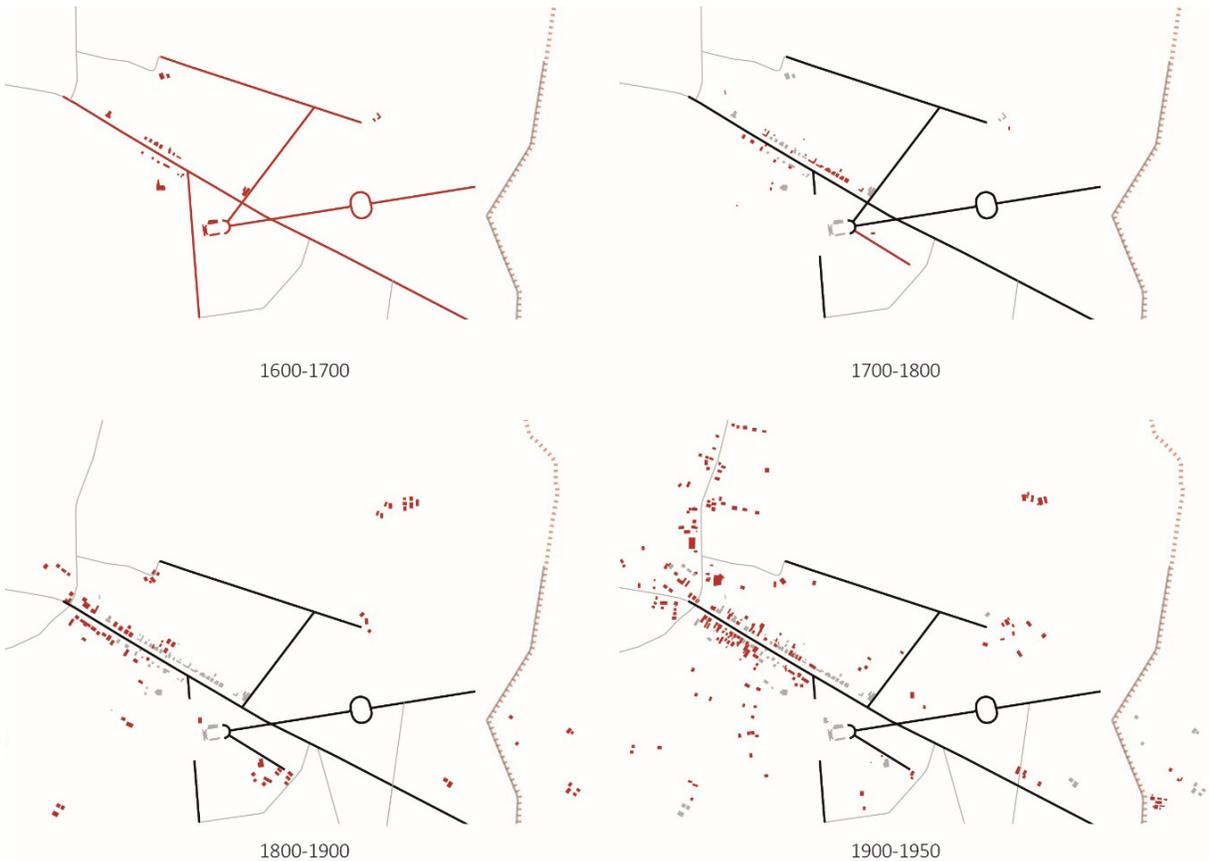1600-1700   1700-1800

1800-1900   1900-1950

FIGURE 5   Schemes of urban planning along sightlines being part of the extensions of a complex avenue system in four periods, initiated by Johan van Reede, the political advisor of stadholder Frederik Hendrik and owner of castle Renswoude. (red = new avenues and new buildings; grey = existing elements; black = existing main avenue structure). The sightlines connected the castle with a new build church, a rectory, fifteen new worker houses and two farms. In later centuries the number of houses rose and turned Renswoude into a small town. [drawings Debie & Verkuijl]

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MEDIEVAL CASTLES AND PRE-MODERN CASTLE TOWNS PLANNED WITH NATURE AS THE HERITAGES FOR LANDSCAPE DESIGN TODAY:
A CASE STUDY OF NANBU REGION IN TOHOKU

The second Dutch example of a goose foot was built between 1639-1641 at the medieval castle Renswoude by Johan van Reede, the political advisor of stadholder Frederik Hendrik. This goose foot was part of an impressive avenue system that was designed as an urban plan. It consisted of an ensemble of a prestigious new dome church, a rebuilt castle, fifteen worker houses for his employees, a rectory and two farms.[39] The goose foot of castle Renswoude was of strategic importance because it marked the border of the region Het Sticht (nowadays known as the Province Utrecht) with the region Gelre (nowadays known as the Province Gelderland). The avenues reached out to the border, that was marked with a dike. The middle 'toe' of the foot was a sightline at the front of the castle accentuated with one of the largest Grand Canals of the Netherlands at that time.[40] The whole avenue system of Renswoude expressed the political power and status of its owners, as they were the political advisors of the stadholders Frederik Hendrik and stadholder-king Willem III.[41] The number of houses along the main avenue was enlarged in 1704 up to 17, and in 1818 up to 33, thus turning Renswoude into a small town.

The third example is the lay-out of avenues which formed the basis for urban planning around the modernised medieval castle Rosendael (1615) nearby the capital city Arnhem (province of Gelderland). From 1667 the avenue system was extended and decorated by Johan (Jan) Van Arnhem (1632-1721), who was a member of the prestige nobility family, mayor of Arnhem and personal advisor of king-Stadholder Willem III.[42] In1711 the nobleman Lubbert Adolph Torck (1687-1758), who owned Rosendael and was the mayor of Wageningen became bailiff of the Veluwe and political advisor of the Stadholder Willem V at the remarkable age of eleven.[43] From 1721 he modernised the castle and its surroundings radically, but kept and extended the avenues realised by his predecessor.[44] The seventeenth century goose foot was a symbolic axis lines towards Arnhem and Wageningen. The main avenue Rosendaalse Allee clearly being part of place-making connected the castle to Arnhem running five kilometres down from the bushy slopes toward the city centre and its Eusebius church. Remarkable is that it centre points starts from the park and not from the medieval castle. A few month before Torck died the construction of the extended goose foot and the new church 'Herenkerk' was finished. He realised several country homes for the family and business relationships and built houses in farmhouse style for their staff. Also a school, post office, tailor shop, blacksmith and laundries were built; everything that was required for an autonomous municipality. After the death of Torck his wealthy widow Petronella van Hoorn created a community known as the village of Rosendaal that in 1818 became an independent town. The presence of these facilities and a large financial legacy enabled the village of Rosendaal to keep its estate appearance untouched.[45] (see figure 5)

These three examples of Dutch urban planning along avenue systems specifically related to goose foots, show strong similarities with Palladio's goose foot at Bagnolo and the planning ideas of Pope Sixtus V in Rome, both designed to strengthen a region and the city. Since the 17th century avenues became an important design tool for the lay-out of landscapes. Not only did avenues express political power of their initiators, nor were there avenues being planted just for profit and speculative gain. Being extended over several periods as an urban planning strategy avenue systems they can be considered as an important place-making statement that influenced our urban environment profoundly.
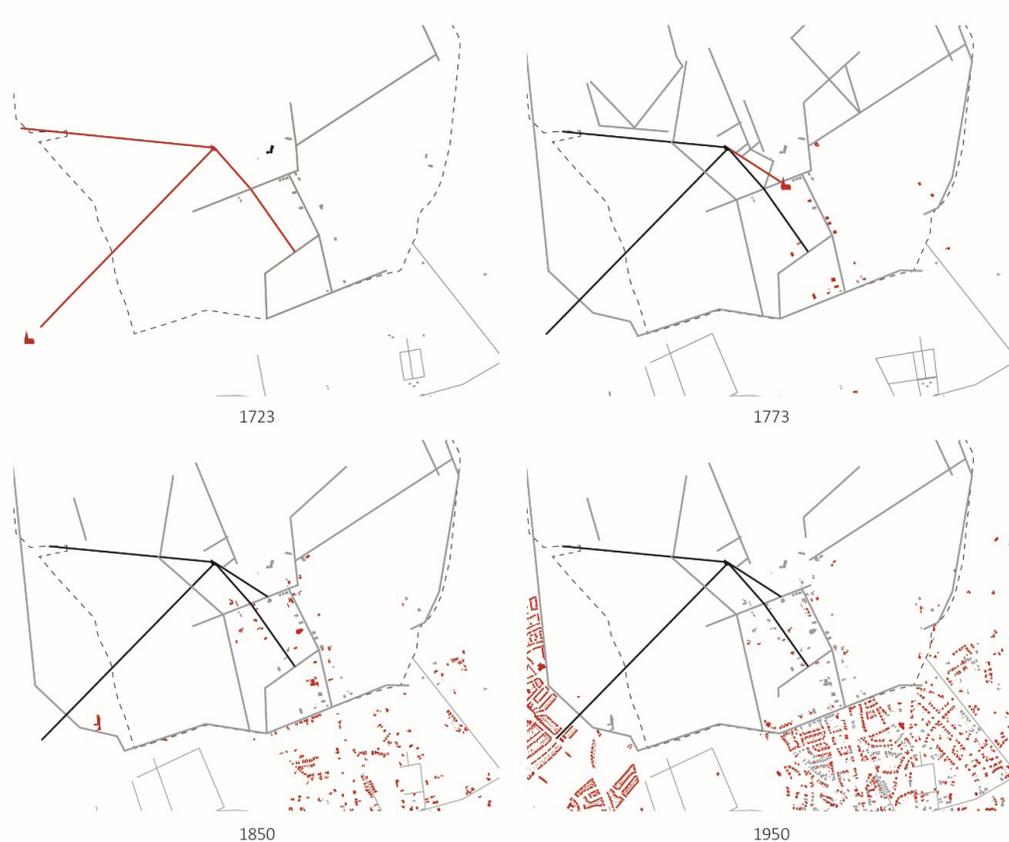
FIGURE 6   Schemes of urban planning along sightlines being part of the extensions of a goose foot at castle Rosendael. (red = new goose foot with extension and new buildings; grey = existing elements or other avenue extensions; black = the goose foot avenues). The goose foot connected the castle with the town Wageningen and the centre of the capital city Arnhem and its Eusebius church. With a new extension the avenue connected a new build church Herenkerk and stimulated further urban development done by its owner Lubbert Adolph Torck, who was the mayor of Wageningen became bailiff of the Veluwe and political advisor of the Stadholder Willem V, to develop Rosendael as a small town. [drawings Debie & Verkuijl]

REGIONAL IDENTITY

Place-making with avenue systems was an important way to structure the landscape. It possessed the potential to influence an urban environment. One might question if these historic avenue systems around estates have such strong patterns that they can be meaningful in our collective memory. Therefore the first step is to unravel its clarity so we can develop strong landscape symbols and accentuate its regional identity.

At the moment Debie & Verkuijl performs a research on avenues of estates in the stadholder period (1550-1800) in different regions in the Netherlands on a larger scale. The research examines its regional identity or an existing regional avenue typology and their similarities or differences for three different provinces; Gelderland, Utrecht and Noord-Holland. In this research already some interesting facts have been acknowledged as we have shown in the previous paragraphs. The Italian design concept of Rome is recognisable in Dutch examples as we have described. They create an a unique routing system that provided a similar rhythmic experience. Comparing Dutch avenues in different regions and with other countries can give greater meaning to the Dutch avenue systems and places its design principles in an international context. Something which was missing in previous publications.

CONCLUSION

The Dutch avenue systems described in this paper show a large number of internally ordered geometric forms that are related to another and to the natural terrain that can be compared with the urban spatial system that the American urban planner Edmond Bacon described in his book *Design of Cities* (1967). Bacon explained that the straight lines that were realised in the city of Rome were of such great meaning because they connected important spaces that were meant to last forever.[46] To compare the geometric Dutch avenue systems with Bacons analyses and other avenue sightline examples places Dutch garden art in a remarkable international position.

The case studies show that since the beginning of the seventeenth century in the Netherlands around estates a unique landscape was formed with straight-lined avenues and canals. Court members and the nobility participated in urban planning by applying avenue systems, in particular goose foots, and building churches and housing. They expressed political sense and prestige with charity for their employees. These structures formed a social grid that was invariably woven in urban planning during the stadholder period and were a starting point for the growth of the cities as we recognise them nowadays. This new kind of urbanisation can be seen as a starting point for the classic Dutch landscape design tradition that inspired many (foreign) estate owners. This Dutch place-making, was often part of a private economic development designed to strengthen a region and the city.

The importance and recognition of avenues as identity systems should be emphasized. Avenues reflect the specificity of the place, culture, history or community. Today, regions can significantly enhance their identity by using these avenue structures to create a high-quality heritage and cultural climate. The avenue systems around estates express a well-structured place. Their designs have influenced the urban environment profoundly and their patterns are strong enough to give meaning to our memory. Therefore the first step is to unravel its clarity of regional structure so we can develop strong symbols and accentuate its identity in our urban landscape.

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Acknowledgements

Disclosure Statement

No potential conflict of interest was reported by the author.

Notes on contributor(s)

With her firm Debie & Verkuijl, landscape architect and architecture historian Patricia Debie works on many projects throughout the Netherlands . She is committee member of Prins Bernhard Cultuurfonds and member of spatial quality and heritage at MooiSticht. In 2012 she received the first Carla Oldenburger-Ebbers award for her research into landscape architect Hendrik François Hartogh Heys van Zouteveen (1870-1943). Currently she conducts research into avenue systems in the Stadholders period as European garden art development. As PhD researcher at the University of Antwerp she examines the influence of landscape architecture on the urban planning of the early twentieth century.

Image Sources

Figure 1-6: Drawing schemes made by Debie & Verkuijl tuin park landschap, Renswoude.

MEDIEVAL CASTLES AND PRE-MODERN CASTLE TOWNS PLANNED WITH NATURE AS THE HERITAGES FOR LANDSCAPE DESIGN TODAY:
A CASE STUDY OF NANBU REGION IN TOHOKU

Endnotes

1 'De Lanthuizen konnen in dry geslachten onderscheiden werden, namelijk in Gemeene; in Eerlijke en in Adelijke: d'eerste dienen tot gemeen gebruik en stille buitenwooning; de tweede voor vermogende luiden, die niet al te veel willen laten blijken, daar glorie in te stellen: en de laat-ste voor die met Pragt en Hoflijke omslag, hun naam en geslagt pogen in aanzien te houden.' Willem Goeree, *d' Algemeene Bouwkunde. Volgens d'Antyke En Hedendaagse Manier. Door een beknopte Inleiding afgeschetst, en van veel onvoegsame bewindselen en verbasteringen Ontswagteld en Verbeterd*, Amsterdam 1681. 175.

2 Jong, de, Erik. 'For Profit and Ornament: The function an Meaning of Duch Garden Art in the period of William and Mary, 1650-1702' in: John Dixon Hunt (ed.), *The Dutch Garden in the Seventeenth Century*. Washington 1990. 16.

3 A castle was generally a fortified medieval structure built by the nobility and used as a private residence, while a palace owned by a member of the court was not only used as a residence but often also was used as a seat of the government that was not fortified. An estate was usually an extended farmhouse or new build villa that was surrounded by agricultural lands for economic profits and used as a country residence.

4 De Jong 1990. 17.

5 Dutch merchants realised several large scale developments like the Beemsterpolder realised by land surveyor J. Adriaansz. Leeghwater with fifteen investors from Amsterdam between 1608 and 1612 about 27 kilometres big and 's-Graveland (1625-1634) where 27 new estates were developped on grounds that were used for sand mining. Toon Lauwen, e.a., *Nederland als kunstwerk. Vijf eeuwen bouwen door ingenieurs*, Rotterdam 1995. 154-167. Heimerick Tromp / Jacob Six, *De buitenplaatsen van 's Gravenland*. Zeist 1975. 11, 13, 17-18.

6 Koen Ottenheym, e.a.. 'De zestiende, zeventiende en achttiende eeuw 1500-1800'. In: Koos Bosma, Aart Mekking, Koen Ottenheym, Auke Van der Woud. *Bouwen in Nederland: 600-2000*. Zwolle, 2007. 235-237. In 1633 the architect Philip Vingboons build a new house Elsenburgh in Maarssen as a country retreat which was an investment for the wealthy mearchant Joan Huydecoper who sold it in 1636 to the merchant Hendrick de Beyer. Patricia Debie, *Historisch-Ruimtelijke analyse landgoed Doornburgh*, Renswoude 2016. 6 en 38-39. The medieval castle Renswoude was bought in 1638 and extended and partly rebuild in 1654 by the nobleman Johan van Reede (1593-1682) political advisor of stadholder Frederik Hendrik van Oranje Nassau. The stadholder Willem III van Oranje Nassau bought in 1674 his hunting rights and in 1684 he bought the medival castle Het Oude Loo as his hunting estate, were he in 1685 extended the grounds and build a new palace Het Loo with impressive avenues around it.

7 Erik De Jong 1990. 19.

8 Ibid. 20, 22. Florence Hopper, 'The Dutch Regence Garden', *Garden History* 9 (1981) 2. 119. Patricia Debie, 'Een historisch-ruimtelijke analyse als uitgangspunt voor de herstelvisie lanenstelsel Het Loo', *Groen* 71 (2015) 5. 45. Patricia Debie, *Historisch onderzoek & toekomstvisie, sterrenbos en lanenstelsel landgoed Zuylestein*, Renswoude 2013.

9 Ibid. 20-22.

10 Anthony Sutcliff, *The Rise of Modern Urban Planning 1800-1914*, London 1980. 20.

11 Allan, J. Scott. *The cultural economy of cities*. London 2000 and David Harvey. 'From space to place and back again: reflections on the condition of postmodernity.' *Mapping the futures: local cultures, global change*. Eds. John Bird et al. London and New York 1993. Cited in: Katherine Fox Lanham. *Planning as Placemaking: Tensions of Scale, Culture and Identity*. [Virginia] 2007. 4, 13-16.. '(...) A place is largely shaped by a patchwork of actions that set up patterns of familiarity over time. (...) which is not simply well organized, but is poetic and symbolic as well. It should speak of the individuals and their complex society, of their aspirations and their historical tradition, of the natural setting, and of the complicated functions and movements of the city world. (...) [This] clarity of structure and vividness of identity are first steps to the development of strong symbols. By appearing as a remarkable and well-knit place, (...). Such a sense of place in itself enhances every human activity that occurs there, and encourages the deposit of a memory trace. (Lynch 1960) (...) Katherine Fox Lanham. *Planning as Placemaking: Tensions of Scale, Culture and Identity*. [Virginia] 2007. 4, 13-16.

12 Erik De Jong 1990. 22.

13 Clemens Steenbergen and Wouter Reh, *Architectuur en Landschap,* Amsterdam 2009.

14 Gerrit Smienk and Johannes Niemeijer, *Palladio, de villa en het landschap*, Bussum 2011.

15 Vanessa Bezemer Sellers, *Courtly Gardens in Holland 1600-1650*, Amsterdam 2001.

16 Erik De Jong 1990.

17 Edmond Bacon, *Design of Cities*, New York 1967.

18 Hans Renes, 'De stad in het landschap' in: Reinout Rutte en Hildo van Engen, *Stadswording in de Nederlanden*, Hilversum 2008. 27.

19 Reinout Rutte, 'Stadslandschappen. Een overzicht van de stadswording in Nederland van de elfde tot de vijftiende eeuw' in: Reinout Rutte en Hildo van Engen, *Stadswording in de Nederlanden*, Hilversum 2008. 151.

20 Patricia Debie, 'Van tuinpaviljoen naar koepelkamer, Geschiedenis en ontwikkeling van de Utrechtse Maliebaan', *bulletin KNOB* (2011) 2, 68-79 and 69.

21 Owning a Manor often went together with rights as collation right (right to appoint a vicar), doing justice and having the hunting right. Within 200 rods around a Manor had the owner the hunting right, just beyond if others as peers in the Knighthood, the nobility and other persons from Court governments. Abraham Jacob van der Aa, *Aardrijkskundig woordenboek der Nederlanden: T-V deel 11*, Gorinchem 1848. 418.

22 In a *parforce* hunt game, mostly deer and boars, was chased over long distances on horseback. The straight roads were ideal to keep the wild in the barrel of the gun. Since he became stadholder in 1625 Prince Frederik Hendrik visited scarcely populated areas on the Utrechtse Heuvelrug in the east of the Republic regularly. These vast areas of open, waste moorlands were very attractive for hunting because of the hilly terrain. F.J. Gaasbeek, 'Boscultuur, De esthetische aspecten van bosbouw op de landgoederen Zuilenstein en Amerongen' in: *Jaarboek Oud-Utrecht*, Utrecht 2000. 57.

23 *Quinconce* is a planting scheme like a play card that accents the perspective with long lines, in spite of a tri-angle scheme that gives only shortened perspective.

24 Florence Hopper 'De Nederlandse klassieke tuin en André Mollet', *Bulletin KNOB* 82 (1983) no. 3 and 4. 98-101 and 112-113.

25 Bacon 1967. 67.

26 Steenbergen and Reh 2009. 21 and 26.

27 Smienk and Niemeijer 2011. 7, 30, 127 and 151.

28 Ibid. 29. Steenbergen and Reh 2009. 111.

29 The stadholders studied classic literature, urban planning, architecture and garden art. Their private library consisted of many classic works. Hopper 1983. 106.

30 The goose foot is in fact a simplified triangle, a diamond shape are two reversed triangles. Patricia Debie, Koos Bosma (ed.) en Jan Holwerda (ed.), *Lanen met vorstelijke allure. Historisch onderzoek lanenstelsel Paleis Het Loo*, Renswoude 2012. 79-80, 83. Patricia Debie, *Historisch onderzoek & toekomstvisie landgoed Zuylestein*, Renswoude 2013.

31 The designs were measured and compared with the current situation in Google maps. See the painting of Palace Hampton Court by H. Danckerts (1665-1667) and the painting by Leonard Knyff (1702-1714) (Royal Collection Trust). Or the descriptions of William Harris during his visit at palace Het Loo (William Harris, *A Description of the King´s Royal Palace and Gardens at Loo*. (...), Londen 1699. 7) The map of Honselaersdijk (1620-1625) by Floris Jocobz.van der Sallem (Algemeen Rijksarchief's-Gravenhage, Nassau Domeinraad, eerste afdeling, vervolg nr. 1475, fol.22).

32 Fieldtrip in 2014 to Palladio villa Maser (1557-1558) on basis of Schmienk and Niemeijer 2011. 95 and measured with Google maps.

33 Schrijverscollectief Van Haeftenkazerne, *Kleine Geschiedenis van een Inlichtingencompagnie*, Apeldoorn 1992. 18.

34 Bacon 1967. 69 and 145.

35 Smienk and Niemeijer 2011. 51-53.

36 The '*Proveniershuizen*' was a residential complex where residents bought themselves for a one-time fee and then could enjoy a lifelong ' free ' room and living. C.A. Evers, *Het Loo in de Franse tijd 1795-1813*, z.pl. 1916. 353 from kind remarks of mister H.A.M. Ummels.

37 The church was built in 1842 by King Willem I and was after a fire in 1890 was rebuilt by Queen Wilhelmina in 1891. Debie 2015. 45-46.

38 In 1806 the French landscape architect Alexandre Dufour designed four sketches and the Dutch landscape architect Leonard Springer designed one sketch which are not realised. Debie 2012. 27, 59-62, 65.

39 Patricia Debie en Jan Holwerda, *Historisch onderzoek lanenstelsel Renswoude*, Renswoude 2015. 23-24.

40 Patricia Debie, 'Het Grand Canal van Renswoude in historisch perspectief', in: J. Holwerda (ed.) en A. van der Does (ed.), *Tuingeschiedenis in Nederland II. Denken en doen in de Nederlandse tuinkunst 1500-2000* (Ulvenhout 2016). 78-79.

41 Johan van Reede (1593-1682) was from 1634 member and from 1652 president of the state Utrecht and was the political advisor of stadholder Frederik Hendrik van Oranje Nassau. Frederik Adriaan van Reede (1659-1738), grandson of Johan van Reede, was from political advisor of stadholder-King Willem III and delegate of the Court. Since 1705 he was on military duty and in 1713 he contributed in the peace negotiations of Utrecht. Egbert Wolleswinkel, Renswoude. *Geschiedenis en architectuur*, Zeist 1998. 96 and Debie 2016. 74-79, 80-81.

42 Johan (Jan) van Arnhem made important improvements at the estate Rosendael, and realised an impressive avenue system with extensions of gardens. As an advisor he also was involved with other garden design. Johan Carel Bierens de Haan, '*Rosendael, groen hemeltjen op aerd': kasteel, tuinen en bewoners sedert 1579*, Zutphen 1994. 23, 28, 39.

43 Lubbert Adolph Torck (1687-1758), Lord of Rozendaal, was a dutch mayor (Wageningen), knight and member of the Admiralty of Amsterdam (1717-1744), and member of the State Council (1741-1746), and a wealthy and powerful advisor of the stadholders. As a urban developer he also build eleven rent houses in Wageningen. Johan Carel Bierens de Haan 1994. 83-85, 94, 135, 199.

44 The birds view of Rosendael by Jan Smit drawn after Barnd Elshof (1718) shows the existing large avenue system around castle Rosendael. Coll. VGK (Vereniging Gelderse Kastelen) Rosendael in; Johan Carel Bierens de Haan 1994. 58.

45 In his will Thorck captured the maintenance of the estate, were no trees were to be cut down, except for improvements of the gardens or use as lumber. Johan Carel Bierens de Haan 1994. 83-85, 89-90, 93-94, 135, 199.

46 Bacon 1967. 67, 124-129.