The foundation, planning and building of new towns in the 13th and 14th centuries in Europe: an architectural-historical research into urban form and its creation
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12 ABSTRACT AND CONCLUDING REMARKS

12.1 Abstract

In the introduction to this study a rough sketch is given of the dramatic cultural transformation in Europe in the period of the 11th to 14th centuries and of how urbanisation was an important part of these events. The structure of settlement in Europe, as it is presently known, was created to a considerable degree in the period from about the 11th to the 14th century. The European landscape changed dramatically, as new land was brought under the plow and many new villages, towns, and cities were created. At present, these settlements, with their old structures and buildings make up the clearest visible reflection of the transformations that took place in this period. Therefore, they serve as a rich and very important source of information for the cultural history of Europe. (par.0.1)

Many of these settlements were explicitly newly created as towns. This means that they were meant to have central functions, resulting in a diversified socio-economic structure, a relatively dense population and concentration of plots and buildings. This last aspect, the density of plots and buildings, is generally the most important in this study, as it primarily focuses on the creation of urban form. And because this study specifically deals with the planning of the spatial structure of newly founded towns in the early phase of their existence, it will also consider newly created settlements that may have been very small, consisting of no more than about twenty house lots, or where the inhabitants relied on agriculture for a large part of their income - Ackerbürgerstädte (‘field burghers towns’) they are aptly called in German. (par.0.3.1)

All in all, at least 1500 towns were newly created in Europe in the 11th to 14th centuries. It was particularly in the period roughly from the 12th to the middle of the 14th century that most towns were newly founded. Therefore, I refer to this period as the ‘high-period of town foundation’. This study focuses particularly on new towns that were created in the second half of the 13th and the first half of the 14th centuries, since this was the absolute peak period of new town creation. It would last several centuries - indeed, until the industrial revolution, when the structure of settlement, and thereby the landscape, again underwent such great alterations as in this period. (par.0.1.1)

The towns were created by the lords of the land: by great lords as well as small lords, by lay lords as well as ecclesiastics. It is obvious from the number of town foundations that, especially from the 12th to the 14th centuries, more and more landlords were convinced of the idea that the privileging of nucleated settlements - and thereby making the inhabitants relatively free - could be an effective instrument for the consolidation and expansion of their power. It seems almost paradoxical, but landlords could actually enlarge their power and income by granting special privileges of an economic, fiscal and juridical nature to their subjects in specific settlements. These privileges could be granted to existing rural settlements; but often, and in increasing numbers, it was given to settlements that were largely newly created. Sometimes they were completely newly created, from tabula rasa one might say; but, for the most part, the new towns were attached to some kind of existing settlement-core, such as a hamlet, a monastery or a castle.

The procedure for the founding of towns seems to have gradually become more standardised. Obviously, the founding lords often made use of previous experiences that had been demonstrated to be successful, until gradually a sort of ‘concept’ was developed. By the second half of the 13th century or so, this resulted in considerable similarities among new town foundations in most parts of Latin-Christian Europe. It seems that by this time, the creation of towns had become a ‘fashionable’ political activity, one which was considered profitable by the landlords as well as by the settlers, who eventually were to become burghers in the successful foundations. (par.0.1.1)

In the past decades a considerable amount of research has been done on newly planned towns of the 11th to 14th centuries. But in comparison to town planning from the 15th century on, the subject is still relatively little studied, and there is hardly any overview of Europe in general, since most studies are concerned with specific towns, regions or founders. Therefore, the intention of this dissertation is to look at the subject of new town planning in the broader perspective of the Latin-Christian part of Europe in general, in order to create an overview. The research is qualitative and explorative in character. The main goal is to reconstruct and describe the process of town foundation from the first idea to the actual realisation, primarily in respect to the spatial layout of the project. Probably, this process was more or less different for every town; but by considering the material of many different new town foundations, in different regions of Europe, a general
description of the process will be formulated. Subsequently, this dissertation discusses the 19th and 20th century historiography of (new) town planning in the period under consideration, in order to explain why important results of our research do not agree with a number of current ideas and theories.

The main sources of this study are the forms of the towns as they presently are, as they are found in archaeological excavations, or as they are depicted in old and modern town plans. The urban plans are explicitly not approached in a typological way, as has been done in earlier research on urban form in the 11th to 15th centuries, since that approach has not lead to historically relevant results. Other very important sources are written texts, either from the period under consideration, such as administrative documents and chronicles, or from the past 150 years or so, in the form of scholarly literature dealing with history, geography, architecture and archaeology. (par.0.2, 0.4)

This study consists of three different parts. In order to get an impression of the politics and processes of urban creation in the 13th and the first half of the 14th century period, part I (ch.1-4) describes and compares three groups of towns about which relatively much is known, that were founded in this period in different regions in Europe. In part II (ch.5 to 9), a number of important aspects of the planning of new towns will be studied from a thematic point of view, after which a synthesis will be given. Part III (ch.10 and 11) then deals with the way that town building in the 11th to 14th centuries has been treated in the historiography of urban creation in the past 150 years or so, specifically concentrating on some points in which this historiography contradicts the material that has been encountered during the research.

Chapter 1 treats the newly founded towns of the country of Wales, which were created from the period of the Norman conquest in the late 11th century to the end of the period of town plantation in the early 14th century and, more specifically, the towns founded by King Edward I of England (1272-1307) in the late 13th century. There is relatively little original documentation as to the creation or the original form of these towns. They have suffered a lot of damage through the ages and have been depopulated a great deal in many cases. Therefore, relatively little is left of the buildings and allotments from the first centuries of their existence. But the outline forms and street plans generally appear to have remained pretty much the same until the time they were first drawn in plans, and even up to the present day. (pars.1.1, 1.2, 1.7)

Colonisation is the keyword with respect to the towns that were founded in Wales. Shortly after the Normans invaded England in 1066, they also conquered Wales. As in England, the Normans founded manors and built castles, often with new towns at their gates. The difference is that in England there already had been many towns, whereas in Wales there were only very few, so new ones were created. (par.1.1.1) The period from about the middle to the end of the 12th century brought success for the native Welsh rulers, who managed to reconquer large parts of their country, particularly in the north and west, including the towns the Anglo-Normans had founded. (par.1.1.2) Under King Henry III (1216-1272) the Anglo-Norman policy of town foundation, as well as deliberate town expansion and fortification, was re-vitalised especially in the west and south, in a process of reconquest. (par.1.1.3) Eventually, northern Wales was reconquered by King Edward I in two military expeditions, in 1276-77 and 1282-83, in reaction to rebellions led by the Welsh Prince Llewelyn ap Gruffydd and his brother Dafydd. Linked to these expeditions, Edward founded nine new towns that were sited at the gates of newly built or newly conquered castles. Two more new towns were founded in northern Wales under Edward I without any military motives; these towns only served economic motives, as market centres. That is not to say that the castle towns did not serve economic motives as well: they were regional market centres and some of them became fairly successful in an economic sense, but they were planned primarily as service-settlements for the castles. (pars.1.4) There were also towns founded by Welsh lords, probably largely after the Anglo-Norman example, but these were relatively rare. The main motive for them must generally have been to generate more income from the lordly domains, by way of rents, taxes and tolls. (par.1.1.2)

The earlier Anglo-Norman towns show a wide variety in their plan forms. (par.1.2) The Edwardian towns that were founded primarily with military motives were often sited on, or right next to, locations that were effectively defendable. Their sites were determined by the strategic quality of the location rather than by the question of economic viability or suitability to the spatial layout of a new town. (par.1.8.1) This had its effect, of course, on the form of the towns, which show a great variation, despite the fact that the Edwardian towns were all founded in the same period and by the same founder. The shape of the landscape at the sites of the new foundations appears to have had much influence on the forms of the town plans. (pars.1.8.2-1.8.2.1)
Among the Edwardian towns, solely Caerwys and Newborough are more or less similar, both consisting of a simple cross of streets. (pars.1.7.9, 1.7.11) Only the most important towns with strategic importance were given town walls; just six of the eleven Edwardian towns were provided with them.¹ (pars.1.8.3.1, 1.7) Apart from Bere, the original plan of which is unknown, the plans of the Edwardian towns show clear signs of planning, although their overall forms may be quite irregular in some cases.² (pars.1.8.2, 1.7)

Many of the towns in Wales were quite small, some of them counting only about a dozen taxpayers. These settlements may have been small or they may have shrunk to nothingness, but originally they were intended to take on urban functions and to serve as real centres with a significant importance relative to their surroundings, in an economic as well as an administrative sense. Many towns suffered from military and economic crises in the 14th and 15th centuries and some of them were completely abandoned consequently. (pars.1.7, 1.10) But, all in all the colonisation was quite successful, and by 1300 Wales was almost as urbanised a country as England. Less than one-fifth of the urban dwellers, however, were indigenous Welsh by that time, as most of the settlers had been deliberately attracted from England and some even from continental Europe. But the Welsh share would grow considerably in the following centuries. At present, the most important urban centres of Wales are still largely towns that were newly created in the 12th and 13th centuries. (pars.1.7, 1.10)

From the 12th to the first half of the 14th century many towns were created in the region of Aquitaine in southwest France. Chapter 2 specifically deals with the towns known as *bastides*, which were founded from c.1230 to c.1350 by various lords of different ranks. In the 11th century the region was still rather thinly populated and to a large extent uncultivated, despite its relatively fertile soils. Until the 13th century the area was largely in the hands of the counts of Toulouse (in the east) and the Plantagenet kings of England as dukes of Aquitaine (or Gascony, in the west), while many small lordships lay strewn more or less in between. With the Albigensian Crusade (1208-29), however, the French king gained control of the county of Toulouse, while the duchy of Aquitaine would follow in the 15th century. (par.2.1-2.3)

In the 11th to 13th centuries many settlements were newly created in this area. Monasteries and other ecclesiastical lords founded so-called *sauvetés*, while worldly lords created so-called *castelnaux* next to their castles. (par.2.2.3) A third group of new settlements, which are known from contemporary sources as *bastides*, was created from about 1230 to 1350 by various landlords. This group consists of more than 350 new towns, many of which were quite small, meant for about fifteen families, while some were quite large, planned for up to 3,000 families. (par.2.2) For the most part they were founded in cooperative agreements (*paréage*) between one or sometimes two local landlords, who contributed the land, and a superior lord, like a count or a king, who contributed military protection and special privileges, which were generally laid down in a charter. Some *bastides*, however, were founded by single lords on their own. (par.2.4.2)

Unlike what is generally thought, the motives for the foundation of a *bastide* appear to have been primarily of an economic character. Because many *bastides* were surrounded by town walls and lay in areas that were heavily contested, they have come to be regarded as fort-towns. But, for a large part of this region, the real military conflict only started in the second quarter of the 14th century, with the Hundred Years War between the French and the English crowns (1337-1453). This meant that many of the more important towns were walled several decades after they were founded. (par.2.5.1) The *bastides* were generally founded because landlords sought to increase the income from their land, by having it cultivated more intensely by renters who could bring their produce to market in the new towns, via which they were connected to the regional and international trade network. In particular, wine was a product that increasingly found its way to the international market. The lords profited from the economic activity by way of rents, taxes and tolls. (par.2.5.4) The settlers were partly newly attracted from elsewhere, but for the greatest part they seem to have been drawn together from villages and hamlets in the region. (par.2.8) Additional motives for the foundation of a new *bastide* might have been to create administrative centres and to increase the effectiveness of taxation. (par.2.5.3) But territorial and political strategy also played a role. Some *bastides* were founded in border areas over which the rights were not clearly defined, so that the founding lord could enlarge his territory or gain specific rights over the area by appropriation. (par.2.5.1) Another motive, which we know played a significant role in the foundation of a number of *bastides*, was to provide protection to travellers on through roads and to the inhabitants of a region from bands of robbers and possibly also from hostilities by the inhabitants of neighbouring settlements. (par.2.5.2)

¹ Of these six, Beaumaris was only given a town wall in the early 15th century, though it is quite likely that a town wall was already planned with the original creation of the town. Flint and Rhuddlan were not surrounded by stone walls, but by large ditches and earthen banks. (pars.1.7.1-5, 1.7.10)

² The original plans of Harlech and Criccieth are not exactly known, but they appear to have been rather irregular, largely following the irregular form of the relief of the site. The form of the house lots and their arrangement (and probably also their original size), however, were quite regular. (pars.1.7.8, 1.7.7)
Many foundations failed eventually. The 14th century brought economic crisis, poor harvests and the bubonic plague. These misfortunes were felt almost anywhere in Europe; but an important factor more specific to this region was the devastating effect of the Hundred Years War. In particular, the smaller bastides located on marginal lands often did not manage to survive these misfortunes. (par.2.4.7)

As to the form of the bastides, the generally held idea that they largely are of the same type is wrong. Since the 19th century it has become a common idea that the bastides are all fortified towns with highly regular orthogonal town plans, outlines that mostly are rectangular, and a central square that is surrounded by four streets passing underneath galleries. (par.2.10.3.1) It is indeed true that some of the bastides took this form, but they are relatively few and the fortifications were generally built only in a secondary phase, after their foundation. Many other plan forms exist, from very irregular to more or less circular, linear or grided. There are almost too many varieties to describe, and there does not seem to be a clear link between specific types of urban structure and specific founders or areas. (par.2.10.3.2) In many cases, however, there is a clear link between the form of the pre-urban landscape and the sort of plan chosen but, for the most part, this does not allow us to say that the plan form can be directly explained by the topography. In general, the plans are quite regular in the layout of their streets, piazzas and allotments, which suggests that they were planned more or less precisely. (par.2.10.4)

In various publications the bastides are presented as though they, or at least many of them, were planned as an integral spatial part of the allotment of the agricultural fields that surround them. This idea appears to be based only on a few cases in which the grid system of the town’s streets extends outward into the surrounding area. In only one case, that of Saint-Denis-de-Saissac, does it appear that the town and an area around it, which may have been intended for gardens as well as for fields, are actually part of one large spatial grid system; but even there the layout is urban rather than agricultural in character. (par.2.10.6)

The so-called terre nuove fiorentine, a group of six towns in Tuscany, are studied in chapter 3. These towns, Castelfrancio di Sopra, San Giovanni Valdarno, Scarperia, Firenzuola, Terranuova Bracciolini and Giglio Fiorentino, were all founded by the government of the city of Florence between 1299 and 1350. Although the last of these was never actually built, probably due to changing political circumstances, it is relatively well documented. Its original documents even include a description of the project and the town plan, which is a quite unique and very important source. (see appendix A). The towns were all located on main routes into the Florentine territory, at a distance of about 25 to 45 kilometres from the city, in the Valdarno di Sopra in the southeast and on a pass route through the Apennine mountains to the north of the city. It is likely that at least four of the six new towns were founded on the sites of older villages, which were removed in order to make a place for the new urban structures. (pars.3.8, 3.9.1)

The main motive for the founding of the terre nuove was the struggle of the Guelph city government against a revolt of the Ghibelline nobility in the Florentine countryside. The city authorities tried to regain control over the territory which had nominally belonged to the city since the Roman period, the so-called contado, in order to secure the flow of victuals and raw materials into the city. In addition to that, the new towns also served to control two of the most important routes into the contado, to secure their use for trade purposes and to block them for use by enemy forces. (par.3.5)

The new towns were mainly settled with people that previously lived in villages and hamlets in the surrounding areas. Although living in the new towns had advantages in the form of privileges and protection as Florentine subjects, and proximity to the main trade routes and the markets that were founded with the towns, it appears that these people sometimes had to be forced to take up their new place of residence, by the levying of fines and even by the destruction of their old houses. The terre nuove must be regarded as satellite towns of Florence, the more so because they only had limited autonomy. (pars.3.5.2, 3.6)

Looking at their urban form, it is immediately striking that the ground plans of the six towns show significant similarities. They have strictly orthogonal street structures, based on a main street as a through route with parallel residential streets, a central rectangular piazza with a cross street extending from it, and narrow secondary cross streets (or alleys). Originally the outlines of the towns were rectangular, surrounded by wide ditches, stone walls with four gates and a wall street all along the inner side of the town walls. A very peculiar feature of their plans are the house lots, which originally were all of the same width, but which are progressively shorter the further they are from the central main street, which therefore really forms the axis of the urban structure. (pars.3.8, 3.9.2.1)

Firenzuola, however, does not share all these aspects, but it appears that its structure was considerably changed in the 15th or possibly already the late 14th century. Its original form must have been much more
similar to the other terre. (par.3.8.4) Despite the fact that there are also considerable differences in plan form, such as in their dimensions and the number of streets, alleys and house lots, the similarities in urban structure mark the terre nuove as a group which is clearly different from other new towns of the period, including other Florentine foundations. (par.3.9.2) The way in which the dimensions of the plans, and particularly the variation in the lengths of the house lots, are designed is treated in chapter 6.

Right from the outset of their foundation churches or chapels were built, and monastic communities settled in the towns not much later. (par.3.9.3.2) Every town had a ‘town hall’ where the representative of the Florentine government resided, overlooking the central piazza and in San Giovanni even standing right in the middle of the square. In most towns there also was a public loggia in the piazza, serving as a ceremonial space and probably also as a covered market space. In Scarperia the official residence was a castle-like stronghold, which also housed the garrison, while in Giglio Fiorentino a keep was planned in one of the corners of the town. (pars.3.9.3.3, 3.9.3.4) From the document which describes the project for Giglio Fiorentino, it is known that the houses on the main street were to have stone facades, two storeys and ceramic roof tiles. It is possible that there were similar regulations in the other towns. (par.3.9.3.5)

The terre nuove fiorentine were fairly fruitful projects. Giglio Fiorentino was never actually built, but the other town foundations were more or less successful. Three of the towns became the centres of administrative regions (vicariati) in the 14th century, and all five of the realised towns actually became market towns of some regional importance. Since the beginning of the 20th century, however, only San Giovanni is a town of economic significance with a really urban character; the other terre nuove are more like large villages. (pars.3.5.3, 3.5.4. 3.8, 3.10)

In the next chapter a comparison is made between the three groups of towns treated in the first three chapters: the Edwardian foundations in northern Wales, the bastides of southwest France, and the Florentine terre nuove. It appears clear that there are considerable differences in the sort of founders, their motives and the consequent functions that the towns had to fulfil, the sort of locations, as well as in (aspects of) their urban form.

The new towns of Wales in general were mainly founded by feudal lords from Normandy and England, and the towns treated in chapter I particularly by King Edward I of England. The bastides of southwest France were founded by great feudal lords (such as the French and English kings, including Edward I, and their local representatives) as well as by local lords, such as knights, counts, bishops and monasteries. For the most part, local lords and more mighty lords worked together, in parage, as town founders. The terre nuove in Tuscany were founded as satellite towns by the government of the city of Florence, which was the nominal lord of the countryside around the city. (par.4.1)

Apart from Caerwys and Newborough, the Welsh towns were sited next to castles that were either pre-existent or built contemporaneously with the towns. An important motive for their foundation was to serve the provisioning of the castle. The towns that were walled also had a military function themselves, which also holds true for the terre nuove. These latter towns were created in order to increase the control of the Florentine government over the countryside, and were aimed against the rebellion of the Ghibelline nobility, while the new towns of Wales were largely founded to gain control over the indigenous Welsh lords and population. But both the Welsh and Florentine new towns also served economic functions, which made them into regional centres. Part of the produce of the land was tapped via their markets, and the founders profited directly from it by way of taxes and tolls, as well as by rents from the house lots and the agricultural land in the surrounding countryside. The foundation of the bastides was, contrary to what is often thought, generally motivated by considerations of an economic character, rather than by military intentions; landlords sought to increase the income from their land by having it cultivated more intensively, by renters who could bring their produce to market in the new towns. Therefore, the bastides were originally rarely fitted out with defences of any significance (though these were often added later, in the 14th and 15th centuries). (pars.4.2, 4.5.2)

The settlers of the Edwardian towns in Wales were largely attracted from England. Only the two non-military foundations of Caerwys and Newborough were meant to be settled with Welshmen. The bastides and the terre nuove were mainly peopled with the inhabitants of villages and hamlets of the surrounding countryside. (par.4.3) In view of this, the Welsh towns clearly are colonial towns, distinct from the two other groups. The terre nuove were also colonial towns, for they were satellite towns of Florence in the countryside, which was still largely to be brought under control of the city-state. But, in a different sense, most of the bastides can also be regarded as colonial towns, since they ‘opened up’ the areas of which they formed the principal nodes to
reclamation, more intensive cultivation and interregional trade, and thereby to more intensive exploitation. (par.4.2)

The rights bestowed on the new towns of Wales and the bastides were in many aspects quite similar, as they were in most regions of Europe. But the specific formulations and the form of the charters were different in the three regions, since they were based on models that were already more or less current in those regions, or on specific examples of other towns founded by the same lord. The inhabitants of the terre nuove, however, became subjects of the commune of Florence. These towns did not receive separate charters and only had limited autonomy. (pars.4.3, 4.6)

Between the three groups of towns a general variation can be discerned in the choice of sites for the new towns, which were related to the functions that the towns were planned to fulfil. The terre nuove were all laid out on flat sites in valleys, on the main access routes, and in the periphery of the Florentine territory, in order to serve the defence of the territory as well as the economy. Bastides were founded in valleys, on hillsides, but also on hilltops. Some of them were sited strategically on sites which were easy to defend, but most of them were laid out where economic goals would be served best, on trade routes or in areas where new agricultural ground could be reclaimed, mostly on fairly flat and open terrain. The new towns of Wales were mostly sited on strategic sites with uneven terrain, largely following the choices for the locations of castles. (par.4.4)

Considering the form of the three groups of newly founded towns, it is clear that there is a great variation. Only the terre nuove fiorentine are all distinguishable by the same basic morphological traits. However, it must be noted here that the terre form a comparatively small group, following one and the same consistent policy and all located on similar flat valley sites, all of which helps in realising forms that follow a more or less consistent model. Some relevant general differences between the three groups of new towns can be noted. The terre, limited as this group is, clearly are the most regular in layout. Amongst the bastides there is a great variety of forms, regular as well as irregular. Although there is a considerable variation in regularity among the new towns of Wales, none of them comes close to plans as regular as those of the terre nuove or among the bastides. This was to a large extent due to a greater influence of the form of the landscape on the forms of the towns in Wales. The terrain on which these towns were built was mostly much more uneven, because the sites were often chosen for their strategic qualities, and it was of course far more difficult to lay out a regular urban structure on steeply sloping terrain with rocky outcrops or with the irregular outline of a peninsular site, than on flat and open land. Another possible reason for the general difference in regularity between the groups of towns is a difference in the stability of the urban structure through time. In general, it seems that the actual substance and structure of the towns in Wales have changed more than in the bastides and the terre nuove. This has to do with the durability of building materials and, probably more importantly, with the fact that the towns of Wales were heavily damaged in the wars and rebellions that the Welsh waged against their conquerors, and with the relatively strong depopulation they experienced, due to the economic and demographic depressions in the second half of the 14th and 15th centuries. Consequently, there is relatively very little architecture from before the 15th (or even the 18th) century preserved in the old towns of Wales, apart from (parts of) churches, castles and town walls. This is a further difference with the other groups of new towns, which have preserved considerably more of their old structure and material. Possibly, there was also a difference in the regulation of the maintenance of the boundaries of urban property, which might have resulted in more change in one region than in the other. But unfortunately there are not enough sources to prove this speculative argument. An important cause for the difference in variation of regularity in the urban layout must be the effort that was taken to make a structure regular (as well as to keep it regular). Apparently, with the terre nuove and the more regular among the bastides, such as Montpazier and Grenade-sur-Garonne, a much greater effort was made to give the towns a regular layout than with other bastides and most of the new towns in Wales. In the one case it was probably found much more important to realise a highly regular urban form than in the other. As the great variation in the form of the bastides shows, this cannot always be ascribed to a specific regional model or to a specific founder, as many scholars would have it. But for the case of the terre nuove fiorentine it is obvious that the relatively great regularity in their urban structure has to do with a certain ‘taste’ concerning urban form that lived in Florence and many of the cities of central and northern Italy at the time. (par.4.5.1)

3 See par.8.6.
4 It should be noted, however, that for southwest France I have made a distinction between planted towns with and without a castle, the castellans and the bastides, while I have not treated these groups separately for Wales. This difference in treatment is justified because in southwest France there is a general distinction in generations as well as in contemporary terminology.
5 See par.2.10.3.2.
6 See par.8.6.
A clear difference in urban form between the three groups is that the *terre nuove* were all meant to be walled right from the outset of the projects, whereas only six of the eleven Edwardian towns in northern Wales were planned to be walled and few *bastides* seem to have been intended to be walled in first instance. (par.4.5.2) The Welsh towns originally had, on average, the largest house lots; the average original lots in the *bastides* were smaller and in the *terre nuove* they were considerably smaller still. The *terre nuove* were quite unique in having a systematic variety of lot sizes, with long lots at the central main streets and ever shorter ones in the rows nearer to the margins of the towns. (par.4.5.3) A remarkable difference in layout between the new towns of Wales and the other two groups is the role of the market place. While market places form central elements in the plans of the *terre nuove* and many a *bastide*, it seems that they were of lesser significance as an element within the urban layout in the new towns of Wales. In the latter, the markets were mostly held in the main street, and if there was a real market place, it clearly did not take on an important central role within the preconceived layout of the town. (par.4.5.4)

In comparing these three groups of newly founded towns, one is easily tempted to put the stress on the dissimilarities between the groups. It should be considered, however, that from a general historical perspective the coincidences between them, as well as with other new towns that were founded elsewhere in Europe, are far more important. These three groups of towns only concern specific regions and periods within a general development in Europe in the period of about the 11th to 14th century, in which many hundreds of towns were created in more or less similar ways, with comparable forms and legal statuses, and with largely similar motives. (par.4.6)

In part II (chapters 5 to 9) important aspects of new town creation in the period under consideration are discussed from a thematic point of view, after which a synthesis is given. The aspects that are treated follow more or less specifically from the material studied in part I. They are: the choice of sites (ch.5); the methods of design, specifically the use of geometry (ch.6); the persons involved in the planning or design of the towns and their professions (ch.7); the ideological aspects of new town creation (ch.8). Chapter 9 contains a synthetic reconstruction of the process of town creation as it would generally have taken place, and also describes the various physical elements that usually formed part of a new town. For the study of these themes, the material of the three groups of towns treated in chapters 1 to 3 plays the main role, but is used together with material from other newly founded towns elsewhere in Europe in order to get a more inclusive general picture, particularly because there are valuable sources elsewhere that give information on aspects that are not, or only barely, covered by the sources regarding the three clusters of towns.

For the success of a town, it was of crucial importance that it was located on an auspicious site. Chapter 5 goes into the sites that were chosen for new towns in the period under consideration. Many of the newly founded towns were never successful simply because they were founded on sites that were badly chosen. The location had to offer at least some basic favourable conditions: there should be drinking water available and the area should offer the inhabitants the possibility to produce food products and raw materials sufficient to their making a living. For economic success, however, a town preferably had to be sited well within the larger system of settlement, so that it would profit from its location within the regional or interregional transport network. But not every lord that wanted to found a town could dispose of such good sites. And in some cases the goals of the foundations were not so much economic success but rather political or military strategy, which was often in some way bound to a particular area, thereby more or less precisely determining the location of the new town. (par.5.1)

It was generally a welcome factor if the site was easy to defend due to its specific location with respect to relief and water. For towns that were founded with military motives or which were sited in hostile regions, like the Anglo-Norman towns in Wales, this generally was an important consideration. But for most new towns this does not seem to have been so important, as they were sited on open land. Accessibility by road and water was an important factor, particularly for towns that were created with the main aim of attracting trade. (pars.5.1.1-5.1.3)

In order to attract enough goods and people to the market, a new town would normally best be located at a considerable distance from other market towns, generally at about 8 to 16 kilometers. Sometimes minimum distances were set out in law books or agreed on between lords and urban communities in the form of market monopolies. In areas of great importance for transport, on rivers or sea coasts, or in areas
of extreme fertility or a wealth of minerals, towns could be set much closer to one another than elsewhere. But if towns were spaced too closely the general result would be that the ones with the least advantageous geographical position and the fewer tenurial privileges would not develop well. (par.5.1.4)

Of course, it was always necessary that the lord-founder could dispose of the site. Therefore it had to be in his own domain, or he could try to obtain the land by purchase, trade or simply by force. Another possibility was to seek collaboration from a local lord, in order to found a town in cooperation with him. Such collaborations of founding lords can be found in many regions of Europe, but they were particularly common in southwest France: the so-called paréages. (par.5.1.5)

Many new towns were located on the sites of older settlements, such as hamlets, villages, abbeys or castles. Sometimes these older settlements were cleared away to make a place for new urban structures, as in the case of the terre nuove, but often they were (partly) incorporated into the new settlements. (par.5.1.6)

The settlers of the terre nuove mainly came from villages and hamlets in the surrounding countryside, as decided by the Florentine authorities. Most of these older settlements were located higher up in the hills and mountains. In the period from about the 12th century onward, this phenomenon of settlement moving from hilltops and mountain sides to plains can also be detected in many other European regions with hilly or mountainous terrain. (par.5.2) In earlier centuries it had been very important for settlements to be sited on sheltered locations that could be well defended, often right next to a castle; but in this later period accessibility became more important in order to stimulate regional and inter-regional trade in the town. Therefore, towns were preferably located at sites which were advantageous for traffic, on interregional roads and navigable rivers, which usually were to be found in the valleys. For the terre nuove and other new towns that were founded in the territories of powerful lords it is also significant that they formed part of developing territorial states, for which reason the maintenance of close contact to other nodes in these states, particularly the centre of power, by way of the traffic routes, was essential. (par.5.2)

Quite a number of the new towns of the 13th and 14th centuries in Europe were actually transplanted settlements. The lords of these settlements decided that other locations would be better suited. Particular reasons Arguments made for these could be, for instance, that towns were damaged by floods, earthquakes or landslides and therefore had to be moved to safer places; that existing sites were too cramped, lacked drinking water, or that they were hard to defend. A more common reason for transplantation, however, was that the town, and particularly its market, was moved to the main traffic route or node of the area in order to profit from the growing regional and inter-regional trade. These routes and nodes may have already existed for a long time or may have been newly created in the period under consideration. It is also possible that important routes or nodes shifted from one road or port to the other, whether or not under the influence of natural conditions. A common new location for towns was the valley bottom, where (new) roads and navigable rivers were to be found. (pars.5.2, 5.3)

From the groups of towns treated in chapters 1 to 3 it clearly appears that the layout of most newly founded towns was largely planned. But unfortunately there are hardly any contemporary sources that provide information on how this was done. In the scholarly literature since the late 19th century many authors have, however, proposed theories concerning the methods of the design of new town plans. Many of them suggest that, particularly in the 12th to 14th centuries, complex geometric methods were used. Some of these theories are discussed in chapter 6.

In most of the plans of newly founded towns of the period, one can recognise an inclination towards regularity and orthogonality. It is obvious that there must have been a very basic idea of geometrical order behind this, involving straight lines, right angles, equality of distances and often even symmetry. Some scholars believe that plans which are more or less regular have been laid out by use of very simple geometry, by setting out straight boundaries at regular distances that were determined as rational, mostly rounded, numbers of the then current units of measurement. This is called ‘arithmetic design’ or ‘simple geometric design’. Scholars have tried to reconstruct specific cases of this method of design on the basis of measurements taken from specific town plans (either in reality or in more or less accurate plans on paper). This has led to various reconstructions, not all of which appear to be very reliable, however, as the accuracy of the measurements that have been taken varies greatly and the probability varies with the deviation that is accepted between measured dimensions and hypothetical original dimensions. (par.6.1)

Other scholars, however, believe that urban plans were designed by the use of more or less complex

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7 See par.2.4.2.
geometrical methods. From contemporary sources it is known that geometry was regarded as a crucial means for architectural design. Not much is clear, however, on how geometry was precisely used in the design process of buildings, and almost nothing is known of whether and how it played a role in urban planning. Since the mid-20th century, a number of hypothetical design methods have been reconstructed, proposing complex geometric figures underlying the designs of the plans of specific towns. After close examination it appears, however, that many of these are quite implausible. In some cases the dimensions of the geometrical hypotheses clearly do not correspond well with the actual dimensions of the plans; while in other cases the supposed process of design is highly unlikely because it is anachronistically complicated or because it contradicts the inherent logic of the process. (par.6.2)

In this chapter a number of reconstructions, particularly concerning town plans of bastides and the Florentine terre nuove, are examined critically. It appears that theories by Higouet and Lauret et al., regarding the use of pythagorean triangles in the design of the bastides of Vianne and Villeneuve-sur-Lot are unlikely. (par.6.3.1) A theory put forward by Guidoni regarding a number of bastides that would have been dimensioned by the use of rotated squares also appears to be improbable. (par.6.3.2) The same holds true for a theory of complex geometric design by Bucher regarding Grenade-sur-Garonne. With respect to this town, metrological analysis actually suggests that it is far more likely that the relevant dimensions were rationally chosen as rounded numbers of the traditional local unit of measurement, the brasse. (par.6.3.3)

The pythagorean triangle also plays a role in reconstructions of design methods for the town plans of many European towns of about the 11th to 14th centuries by Humpert and Schenk. In their opinion the use of these triangles was combined with many other geometrical manipulations in highly complex design systems, which not only serve to explain regular elements in town plans but particularly irregular elements, such as curved streets and irregular outlines. The proposed design methods are, however, highly implausible because they are very complex and they lack logic and any consideration of possible motives. In addition to that, many of them were probably impossible to execute on the scale of the actual town plan, which makes them even more unlikely. (par.6.3.4)

Regarding the plans of the Florentine terre nuove seven authors have proposed different geometrical methods by which the most important dimensions would have been arrived at, while two authors have proposed simple arithmetic methods. Close examination of these hypotheses suggests that most of them are highly unlikely and that the hypotheses of Guidoni, Friedman and Pirillo, and an adjustment to Friedman’s theory by Van den Heuvel seem more plausible. (pars.6.4.1, 6.4.2 and app.B.2-B.3) In order to find out to what degree these proposals correspond to the actual existing urban structures, they are compared to the modern town plans of the relevant towns by graphic verification and metrological analysis. (pars.6.4.2 and more detailed in appendix B) From this analysis it appears most likely that relevant dimensions in the plans of San Giovanni, Castelfranco, Scarperia and Terranuova were arrived at by the use of geometrical figures underlying the plan, more or less as the theories of Guidoni and Friedman (and the suggestion by Van den Heuvel) claimed. The design method would have worked using regular polygons with 6, 12 or 24 sides, in order to determine the distance between alignments of street blocks and streets that lie parallel in the longitudinal direction of the plan. In the case of Terranuova this geometry probably also determined the placement of the transverse streets and the dimensions of the perimeter of the town. The town plan of Giglio Fiorentino, however, appears not to have been dimensioned in this complex geometrical way, but rather by simple arithmetic design, which most probably was also the case for a considerable part of the remaining dimensions in the plans of the other terre nuove. (par.6.4.2 and app. B)

This design method using regular polygons may have been derived from a contemporary method of dimensioning palazzo-facades, and the underlying geometric figures may have been inspired by compass roses, geometric figures on astrolabes or circular models of the cosmos that were radially divided into twelve parts. Unfortunately, however, there are no clear indications in this matter. (par.6.4.3.1) The designs were most probably first made in drawings. Probably, the regular polygons were set out, either on a reduced scale on a drawing board or a floor (from which the dimensions were measured and multiplied), or on the ground of the site itself. In the last option, the figures may not have been set out at full scale since that was probably quite difficult for the long ropes that were needed. It is likely that the figures were set out at a reduced scale - most probably half size - from which the relevant dimensions were geometrically multiplied. (par.6.4.3.2)

Many scholars who have proposed hypothetical reconstructions of geometrical methods of urban design silently pass over the crucial question of why such methods would have been used. From philo-
sophical writings of the 11th to 13th centuries it is known that great importance was attached to geometry and arithmetic as a means of understanding the Divine creation and to create beauty and order in harmony with the universe. It seems likely that many of the scholars who have proposed hypotheses for geometric design methods for town plans in the period under consideration tacitly believed that this inspired the use of these methods. In fact, this also seems to have been the reason for the geometric design method of the terre nueve: it was to bring the towns into auspicious harmony with the order of the Divinely created universe. The fact that the geometric figures bear likeness to circular or polygonal cosmic symbols and depictions of the Heavenly Jerusalem may also be interpreted as an indication of this meaning. An additional motive may have been that the designer aimed for personal reward and fame or the advancement of his profession, as geometry was such a highly valued art. (par.6.4.4) Unfortunately, it is impossible to discern what the relative importance of the different possible motives was and to what degree people - planners, settlers and the public - were conscious of them.

In conclusion, it is highly likely that four of the terre nuove plans were dimensioned by the use of complex geometric methods. This seems to be quite unique, however, as I know of no other new town plans of the period that are likely to have been designed by use of complex geometry. Many seem to have been planned by the use of relatively simple straight lines, right angles and arithmetical dimensioning. Moreover, one should also keep in mind that there are also newly created urban structures that were laid out with rather irregular non-geometric plans. Nonetheless, many scholars appear to have favoured the idea of complex geometric design over other possible methods, such as dimensioning by arithmetically determined distances and proportions. The plan of Grenade-sur-Garonne, for instance, has been featured prominently in literature on ‘geometric design of town plans in the middle ages’, although it appears quite clear, both from plan analysis and from a contemporary document which specifies the dimensions of the house lots, that relatively simple arithmetic design is a far more likely probability. Many scholars just assume that ‘medieval architectural design’ involved more or less complex geometric methods. Although these scholars often do not explicitly write so, this assumption seems to be largely (and often indirectly) based on contemporary texts that mention the importance of geometry for the understanding of Divine creation and texts that indicate that geometry was regarded as a very important element in architectural design. Furthermore, the assumption appears to be based on erroneous ideas about the ‘medieval mind’ thinking symbolically or mystically, and therefore not rationally, and of ‘medieval masons’ using ‘secret methods’. (par.6.5)

Geometry was a highly valued art and it surely was important in architectural design, but this does not mean that urban structures could not be designed on the basis of the simple geometry of the regular orthogonal grid and arithmetically determined dimensions. For a long time scholars have generally assumed that in ‘the middle ages’ geometry was the basis of architectural design, and that it was displaced by arithmetic in the ‘renaissance’. In our opinion, however, the supposed contrast between geometry and arithmetic as being completely different design methods of necessarily different periods, is wrong. I believe that this idea sprang from the more or less explicit view of history as being divided into different periods, in this case especially regarding the difference between ‘the modern period’, as essentially characterised by rationality and clarity, and ‘the middle ages’, which are regarded as mystical, dark and mysterious. This view is a gross simplification that obstructs a clear view on historical reality.** (par.6.5)

Chapter 7 addresses the questions of who the planners of the spatial forms of the new towns were and what their profession was. The contemporary written sources generally do not mention anything about the planners of new towns, but it is obvious that with the creation of a new town a plan would mostly have been thought out in more or less detailed form, before the work on the site actually began. In modern literature on newly created towns from the high-period of town foundation, many authors - particularly scholars with a background in the discipline of architecture and urban planning, rather than in history - ascribe the spatial planning to professional architectural designers, or even to professional town planners. This, however, appears to be a retro-projection of the modern situation, which is not justified by the evidence of the sparse sources. Various persons who are known by name from historical documents, such as Elias of Dereham and mansionarius Lambertus, are taken to be professional architects or ‘building masters’ who planned new towns, in these cases New Salisbury and Fribourg. But in every case I investigated it appeared either that the person involved was not a professional from the building trades but rather was a kind of general organiser, or that the mentioned person may have been a professional but that he cannot be positively identified as the designer of the urban layout. (par.7.1)

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8 See ch.11.
In ancient narrative sources, which are usually from some time after the town foundation, the design of a new town is often ascribed to the founding lord. It appears, however, that this is a topos that must not be taken literally. Probably, the lord generally assigned an officer to oversee the job, who may have assigned someone else to design the spatial layout. (par.7.2)

To the extent that contemporary written sources mention specific people involved in the planning of new urban structures at all, they are almost always concerned with persons who were responsible for the general organisation and administration of the project: clerics, clerks, notaries, officers and notable citizens, such as the men in the committees that were responsible for the planning of Giglio Fiorentino in Tuscany and Berwick-upon-Tweed in northern England. (par.7.2) The sources also mention entrepreneurs who were engaged in the planning of villages and, less often, towns. They are particularly numerous in the lands east of the river Elbe, where they were generally designated as locatores. (par.7.3) For all these officials and entrepreneurs, it is not known in what measure they actually were involved in the spatial planning of urban structures but, given the lack of sources that suggest otherwise, they must be held responsible. Various scholars have wrongly labelled these men as professional town planners, whereas other scholars suppose that they must have hired others that were experienced specifically in spatial planning. It would seem likely, indeed, that the experience was used of men who had been doing the same job previously elsewhere in the time before. It seems particularly likely that, when several towns were created for the same lord, he set the same men to work at the different towns. But there are no written sources to confirm this, apart from the notary Pons Maynard at the bastides of Montréal-du-Gers and Castillionès, the committee that was involved in the foundation of Castelfranco, San Giovanni and a third town in the Valdarno di Sopra in Tuscany, the ordenadores and stabildors that were to create fourteen new towns on Mallorca, and a number of locatores that were involved in the planning of several villages and towns east of the river Elbe. In a certain sense, one might call these people (part-time) town planners, but with this it is essential to note that the most important part of their job probably was to organise and oversee the operation of the creation of new towns, rather than to design their urban form. (pars.7.3, 7.5, 7.6, 7.9)

Regarding the new towns of Wales, there are no concrete indications of who planned them, but for the new towns that were founded there in relation to military campaigns and that were laid out in relation to new castles (for instance Flint, Conwy, Caernarfon and Beaumaris), it seems logical to ascribe the spatial planning to military architectural designers, such as the ‘master of the king’s works in Wales’, James of St. George. Elsewhere in Europe, military architectural designers or engineers may also have been involved in the spatial planning of towns if they were planned with military motives. (pars.7.2, 7.4)

Concerning the Florentine terre nuove, Giorgio Vasari’s Vite of the 16th century identified the architects/sculptors Arnolfo di Cambio and Andrea Pisano as designers. These attributions appear not to be very reliable, however. That Andrea Pisano was involved is most unlikely; Arnolfo’s involvement is not unlikely but can not be verified and, given Vasari’s intentions, may well be a fabrication. According to surviving documents, the realisation of the town of Scarperia was given over to the administrative and military officer of the region, and the other towns were realised under committees made up of officials that were chosen from the politically active citizenry of the city. According to the main authority on the terre nuove, David Friedman, professional architectural designers who acted as advisors to the committees must have designed the layouts, but this seems to be unwarranted, as there are no concrete sources that confirm this view. (par.7.6)

For new towns of the 12th to 14th centuries in general it seems valid, given the lack of sources, to assume that surveyors who were involved in the setting out of spatial structures may also have designed those structures. There are only a few references to the involvement of professional surveyors in the laying out of new towns, but it is a fact that someone had to mark out the planned layout on the land, and it is likely that this was often done by surveyors. These surveyors may have been full-time professionals, or they may have been notaries, monks, teachers of geometry or people from other professional backgrounds who did the job on the side, as we know from a small number of written sources. Actually, there is one contemporary text which identifies a ‘geometrician’ by the name of Symon, probably a surveyor or part-time surveyor, as the planner of the layout of an urban extension at Ardrès in northern France. (par.7.7)

Since the organisation of society is a very important aspect in the human world-view, the landscape of settlement, which is the artificially created stage of human society, must necessarily reflect ideology, and particularly ideas about the organisation of society. One would expect that this must be even more true when explicit planning, which is implicitly aimed at order, is at issue, as in the planning of new towns. In chapter
8 the subject of ideology relating to the phenomenon of the town and its society is studied, for as far as it is relevant to the creation of new towns in the period.

The chapter first deals with ideologies relating to civic society, both in general as well as concerning its spatial form. In Christian thought, the ultimate ideal of society is heaven. In the bible, this Christian heaven is described in the form of the Heavenly Jerusalem, which is a city on a mountain with a square outline and having a city wall with three gates in every side. The contemporary Christian ideal of the earthly city was the Civitas Dei, as described by the church father St. Augustine. The spatial form of the Civitas Dei is not described by Augustine, but it was usually depicted in the form of a circle or a polygon. One would expect that the form of newly founded towns of the period would have been inspired by these ideals. There are, however, no clear signs of this. Elements of these ideals can be found in churches and monasteries, and even in towns, but they are not reflected in the urban layout, for as far as known. (par.8.1)

In various texts, however, real cities are compared to the ideal Christian cities. (par.8.2) In the late 14th century the Aragonese cleric Eiximenis was clearly inspired by the form of the Heavenly Jerusalem when he wrote a chapter entitled 'Which form should the beautiful and well-built city have'. (par.8.2.1) There were new towns which we know to have been founded with ideological motives, such as the towns founded by the Hussite sect and other religious movements with eschatological expectations, and the (projects for the) foundations of Count Reinoud I of Gelre. In the latter case the urban forms do not appear to have been influenced by the ideology, but the Hussite town of Tábor may owe its highly irregular form to the fact that private property was initially renounced by the sect. (par.8.3) It seems likely that other societal ideologies - though also essentially Christian in character - were relevant for the Florentine terre nuove, where different classes of lot sizes were created, and for many other new towns where the house lots were initially all meant to be of equal size. But, unfortunately, there are no sources that clearly confirm this. (pars.8.5.1-8.5.2)

The conclusion of the first paragraphs of this chapter (pars.8.1 to 8.5) is that, with the vast part of the newly founded towns from the high-period of town foundation, there are no concrete indications that ideological motivations in the sense of societal ideals played an explicit role. It may well be, however, that the fact that so many towns were newly created was, to some extent, motivated by Christian societal ideals, but in an implicit way. I believe that it is illustrative in this respect that St. Thomas claimed, in his De regimine principum, that the city is the ‘[...] best form for the material and moral existence of man’, and that he wrote that the foundation of cities is one of the most important functions of a king, comparable to the foundation of the world by God.9 (par.8.2)

So, societal ideals seem to have influenced the foundation of new towns and their shapes, at least to a certain extent. But it remains very vague to what extent precisely this was the case. The final part of the chapter considers aesthetic ideologies in relation to the urban form of newly planned towns and newly planned urban ensembles in existing towns. It appears that order and regularity were sought after in urban form because, apart from various practical considerations, they were experienced as beautiful and formed an aesthetic ideal that was related to the symbolism of moral righteousness and philosophical ideas concerning order in urban society and the structure of the Divine creation.10 In fact, ideas about spatial, societal and cosmic order appear to have been linked to each other up to a certain extent in the field of urban planning. This resulted in public streets that were preferably straight, wide and with regular facades along them, and urban structures that were preferably regular and orthogonal, and thereby easily comprehensible and surveyable. (par.8.6)

In chapter 9 a reconstruction is attempted of the process of town creation as it would generally have taken place in Europe in about the 12th to 14th centuries (pars.9.1-9.10), and in the second part of the chapter the various physical elements of the towns under consideration are discussed (pars.9.11-9.23).

Most of the new towns that were created in Europe in about the 12th to 14th centuries can be described as ‘colonising centres’. Their main goal was to enable the founding lords (whether king, abbot, seigneur or civic administration) to get a stronger hold on the land, people and capital of a specific spatial area.11 The essence of the foundation of any new town was to gather settlers at a specific place. But the concrete motives for town foundation may have varied from case to case. New towns may have been aimed at the defence of a region or the guarding of the rural population or of a trade route. Connected with such military motives is the town’s role as an intended administrative centre, especially of newly conquered territories: new towns could be very effective instruments for surveying and taxing populations. Very important for the founding of new towns are motives of an economic nature. These can vary from facilitating the exploitation of (newly

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10 See also pars.6.4.4, 6.5.
11 See also pars.6.1.3 and 10.3.1.
created) agricultural land or mines, stimulating trade, creating new markets and transport facilities (bridges, harbours), to attracting craft production.

Eventually, the prime motive of practically every town foundation was that the founder would gain some advantage from it, be it by collecting more rents and taxes, by a stronger military position, by having tighter administrative control or by enlarging his territory. The founding lords sought to enlarge or consolidate their power by using the growth of the population and the economy as their instrument. However, this was only very rarely explicitly mentioned in the documents related to the foundations, and sometimes the prime motives may have actually been veiled behind stated charitable formulations. (par.9.1)

In the traditional historiography of town building the motives for the foundation of new towns in ‘the middle ages’ have mostly been described as being primarily, or at least strongly, military in character. It seems that deliberate economic policy generally has not been taken seriously by modern scholars to have been part of contemporary politics. This is fundamentally wrong, however. It is clear that economic policy was part of the politics of dominion over territories and subjects in the period, and that it played an important role in settlement policies. Although it is quite impossible to adequately and objectively set off the one motive in relation to the other, it is our opinion that economic exploitation was a far more important motive than was military strategy for town plantation in general. (par.9.1.6)

The rights bestowed on the new towns were in many aspects quite similar, but the specific formulations and the form of the charters were different, generally being based on older models from the same region or the same dominion. The basic legal principle of town plantation was always more or less the same: the lord of the land exempted the people who took up residence in the specific area of the town (and who agreed to the contract of settlement) from the normal legal regulations of the countryside. The lord rented out plots of land within the specified area, giving up part of his rights in favour of the settlers of the new town. He allowed the establishment of a market and he gave the settlers who rented plots some degree of personal freedom and the right to freely dispose of their possessions and their rented plots of land. In this process, these ‘burgesses’ were bound by their common rights, which set them off against the people living in the surrounding area and other towns, making them into a community. (par.9.2)

It seems that new towns were not always given a specific name; often they just took the existing name of the location, and sometimes the terms which are used in the documents are rather like short descriptions, as for instance Novus Burgus. (par.9.4) We cannot be sure, as sources are scarce, but it seems likely that many new town foundations were symbolically inaugurated at a specific moment by a consecration ritual. For instance, we know that in some cases the new settlement’s outlines were traced with a plough, as in antiquity, while in others a cross was put up in its centre. (par.9.5)

Regarding the laying out of the spatial structures of new towns, it is obvious that there were considerable differences among them. Nonetheless, it is possible to make some general remarks. Most newly founded towns were created on the sites of existing settlements. Farms, hamlets, castles and villages were favourite places for the siting of new towns, which could be laid out either over or next to the existing settlements. Later on in their history, the newly founded towns would mostly form the core of further expansion themselves. It is likely that with the actual foundation of a new town, there must always have been some kind of scheme, however vague, for the division of space. The founder destined a specific piece of land for the new settlement, which was often marked out by poles, crosses or ditches, and within that piece of land different areas had to be designated for different functions, such as roads, markets, moats and house lots, or for different users: the various settlers, ecclesiastical institutions and the founder himself. These elements had to be put together into a general plan, which may have been very basic or may have been more elaborate. It might have been an ‘ideal’ orthogonal plan made up in the mind of the planner, irrespective of the actual circumstances; or conversely, a plan set out more or less clearly on the ground with consideration for the conditions of the site, like existing roads, properties, water courses, slope, etcetera. It is obvious that the first kind of plan would be more regular in form than the second, but there are several other important factors that would influence the amount of regularity of the eventual layout: the amount of effort and costs the founder would want to invest in the regularity of the layout; the accuracy of the method of setting out the plan structure and marking it on the ground; the amount of time it took between the setting out of a plan on the ground and the actual occupation; the strictness of supervision over the distribution of lots; and the presence of building regulations and their maintenance. Of course, many layouts also changed in the centuries after they were first occupied, which mostly (at least until the 19th century) lead to their progressive loss of regularity. (par.9.6)

12 See also pars.2.5 and 3.5.
There are various possibilities as to what would have been done to prepare for the allocation of the house lots. In some new towns the regime of spatial order may have been more or less free, as long as the size of the lots that was agreed on would be respected, and old or newly set out roads would not be intruded on. In this way, the number of settlers would largely determine the eventual form. (par.9.6) In other cases, considerable works may have been executed in advance, for instance the raising or levelling of the ground surface, the laying out of a drainage system with ditches, or the laying out of defences, such as banks and ditches, palisades or even stone walls. (par.9.7) In most cases, so it seems, the founding lord or his officer would have determined the number and size of the house lots (as well as the lots for gardens and arable fields) that were to be issued. Sometimes all house lots would be set out initially, while in other cases only the lots that could be issued immediately, for which new settlers were present, would be marked out. In documents we can often read that the house lots were of a standard size, but various instances show that this was only so on paper: lots would also be issued in multiples or parts. Maybe the standard size was just for the purpose of the calculation of the rents or was used to attract settlers. (pars.9.6, 9.11)

The founders of new towns often took the responsibility of building a number of edifices for communal or public use, such as a church building, a house for the administrative officials, a market hall, a well, a mill, a bridge or a quay. The founder often also took care for the creation of a monastic house of some sort and, when fortifications were planned, the lord would see to the construction of (at least) the gates, while the construction of walls and moats might have been given over to the community. (pars.9.8, 9.14-9.22)

With the foundation of a new town, the founder must have had an idea of where the future settlers of the town would come from. Generally, there were two possibilities: people from the nearby territory of the lord would be resettled in the new town, or settlers were attracted from further away. Until well into the 20th century, the general idea has been that the growing urban population of the 12th to 14th centuries was mainly made up of fugitives from feudal oppression in the countryside. It appears, however, that this idea is largely wrong, and may be even more wrong when it comes to newly planted towns in particular. It seems that quite a large part of the new settlers already enjoyed considerable freedom from feudal bonds, and they must also have had some money to spend, as they often had to pay a specific sum to become citizens. Serfs were often explicitly excluded from citizenship. In many town charters one can also find bans on settlers from the nobility, clerics and people of a specific ethnicity or religion, such as Jews, Moors, Welsh or Slavs. (par.9.9)

For the most part, the recruitment of new settlers, whether from nearby or from far away, would probably have begun soon after the decision to found a new town. Once again, there are no sources that clearly describe how this happened, but we may assume that in most cases it was announced orally that a new town was to be founded, praising its attractions and advantages, such as its appealing location and the many privileges to be granted to its settlers. The settlers were all assigned a house lot, on which they had the duty to build a house, usually within one year, in order to make sure that the foundation would actually become a town in a physical sense, and to limit the possibility of speculation with the property. To meet the costs and efforts of moving, building a new house and a new living, new settlers were freed from the duty to pay rents and taxes during their first years in the new settlement. (pars.9.9, 9.12)

Finally, part III of this dissertation (ch.10 and 11) deals with the way the subject of town building of the 11th to 14th centuries has been treated in the historiography of town building in the past 150 years or so. More specifically, it deals with some particular problems with this historiography that have been encountered during the research.

The European new town foundations of the 13th and 14th centuries are placed within a wider temporal and geographical perspective in chapter 10. New towns were already founded long before the period of this study. Archaeologists have found urban centres that were most probably newly created according to more or less accurate planning from, among other places, the ancient Egyptian empire, the Harappan culture in the Indus-valley, the ancient Chinese empires and the pre-Columbian civilizations of central America, and in Europe from the ancient Greeks, the Lausatian culture and, of course, from the Roman Empire. (par.10.1)
After the fall of the Western Roman Empire many urban settlements in Europe succumbed to invasions of foreign peoples and the collapse of trade. In this period very few towns were newly founded. From about the 10th-11th centuries on, improving conditions meant that the population and the economy started to grow again. This resulted in, among other things, the growth of settlements and of the area of cultivated land, as well as in the creation of new villages and towns. Many of the newly created settlements are clearly recognisable as planned structures by their relatively regular and basically orthogonal plan structures. Many scholars have tried to identify a common source of these urban orthogonal plan structures. It has often been suggested that Roman colonial towns or forts were taken as models. This does not seem very likely, however, as there are no concrete indications that support this idea. Other scholars have suggested that the source of the orthogonal town plans of the post-Roman period can be found in town foundations in 12th-century Italy, 11th-century Flanders or England in the 8th century. In our opinion, however, there is no one and only source for the orthogonal town plans in Europe in the post-Roman period. Much as, on a world scale, the orthogonal plan was ‘invented’ independently in the ancient Near East, China and central America, it seems to have been ‘invented’ on different occasions in post-Roman Europe as well. After all, it is a fact that when the human mind seeks to create order on a two-dimensional plane - and the idea of order is, of course, fundamental in town planning - the orthogonal scheme is the most obvious solution. (par.10.2, 10.2.1)

Looking at the plans of the newly founded towns of the period of about the 11th to 14th centuries, one can recognise a general development in the town plans towards greater spatial regularity, which tended to work towards true orthogonality. This tendency was especially evident during the 13th century. It seems to have been caused by a growing experience with town foundations and an increasing striving for spatial order. This increasing interest in the regularity of spatial partition had to do with the pecuniatisation of the land due to its growing scarcity relative to the increasing population, as well as with the general trend of quantification, which changed the perception of time, space, movement and matter. Apart from that, the desire for a regularized spatial urban order also had to do with symbolic values.13 (par.10.2.2)

After the high-period of town foundation, in most regions of Europe ending about halfway through the 14th century, relatively few new towns were created until the 19th century. Curiously enough, however, we are much better informed on the theory of town building from about the 15th century on by theoretical writings, and on actual projects by documents. The theoretical works were mostly treatises. These were initially inspired by the architectural treatise De Architectura libri X of Vitruvius, from about 30 B.C. This work had been copied ever since antiquity, but by the 15th century it inspired authors to write architectural treatises of a more or less similar sort. Therefore, there is a distinction to be drawn between the period of about the 12th to 14th centuries and that of about the 15th to 18th centuries. In the first period many new towns were created in Europe; but we barely know anything about town building theory in this period, presumably because there was not much explicit theorisation in this field. In the second period it was the other way around. So, from the first period we mainly know practice, and from the second we mainly know theory.14 (par.10.3)

In the second period, many new towns were built under European rule, but this happened mainly in the overseas colonies. Like the Greek and Roman colonial towns, these new settlements were mostly laid out on orthogonal grid plans. Various scholars have claimed that the planners of the new colonial towns, particularly the Spanish, were explicitly inspired in this by Roman examples and by Roman theory and that, therefore, the new towns formed a genuine product of ‘renaissance’ thought. This idea is, however, largely wrong. It seems to stem from an inherent urge to link historical events to what have generally come to be seen as typical ideas of the period, in this case ‘the renaissance’. Actually, the layouts of the new colonial towns rather appear to be the product of the tradition of new town planning in Europe in the previous centuries, as were most of the relatively few new towns that were still being created in Europe. In fact, the new towns that had been created in Europe were also ‘colonial towns’ in a certain sense: particularly those that were built in newly conquered territories, such as those founded by the English in Wales and those founded in Spain after the reconquista from Muslim rule. But in another sense it also holds for those that were created in territories that were newly reclaimed and opened up to interregional trade, as with many of the bastides and towns in Eastern Europe and the Baltic. Even the Florentine terre nuove can be seen as colonial towns, in the sense that they were colonial foundations of the city of Florence in a rather hostile countryside. (par.10.3.1)

13 See par.8.6.
14 This dichotomy is treated in more detail in chapter 11.
The regular orthogonal grid was used over and over again through history, for creating new spatial order on the land and, particularly, in nucleated settlements. This is not so strange, since it is the simplest system for regular allotment and orientation that we know. With this system, authorities could enforce their spatial order on existing natural and cultural structures. In this way, it could function as an instrument and symbol of dominion, of man over nature or of one authority over society. (par.10.4)

As already noted in chapter 10, many more towns were newly created in the 12th to 14th centuries than in the centuries before and after; for that reason we have used the term ‘high-period of town foundation’. Despite that fact, the general idea that people have (the lay public as well as many scholars) is that real town planning only came to be practiced from about the middle of the 15th century. The idea is that the art of town planning was reborn under the influence of recovered knowledge of antique theory and practice during the so-called ‘(Italian) renaissance’. Since about the 19th century, scholars have thought that the straight street, the orthogonal town plan and spatial regularity in general, are typical aspects of ‘renaissance town planning’; and, conversely, ‘the medieval town’ has been regarded as an irrational and irregular ensemble of winding streets and narrow alleys within a tightly confining town wall, which has grown more or less spontaneously. Despite the more recent publication of various studies that clearly show that this image is wrong, it is still adhered to by many scholars. Chapter 11 goes into this traditional perception of the form and formation of the ‘medieval town’ and how it came about, the question of why that perception does not correspond with the material treated in this study, and how this conflict might be solved.

The misconceived cliché images of ‘medieval’ and ‘renaissance town building’ are due to the selective non-representative choice and over-generalising treatment of examples of historical urban structures (Siena, Bruges, etc.) and to axiomatic ideas with regard to non-rational and rational thought in the periods of ‘the middle ages’ and ‘the renaissance’ or, for that matter, ‘modern times’. In general history, and maybe more so in art history, the periods of ‘the middle ages’ and ‘the renaissance’ are traditionally viewed as contrasting temporal entities, and this view has also been forced on the history of town building. Concluding from the material treated in the previous chapters, it is obvious that the cliché image of ‘medieval town building’ is incorrect. (pars.11.1, 11.2, 11.4)

And the same holds true for the cliché image of ‘renaissance town building’, since it is based largely on the theoretical writings of the 15th to 17th centuries and the few towns that were built according to their principles, and not on the general practice of town building in the period. Considering the actual practice of town building, it clearly appears that the idea of the antithetical juxtaposition of ‘medieval town building’ to ‘renaissance town building’ is largely nonsense. In fact, there was an ongoing development rather than a sudden change. There surely were more or less sudden changes, but these concerned town planning theory (the new theoretical treatises) and fortification techniques (polygonal circuits of earthen walls and ditches with projecting bulwarks instead of stone walls with towers), and these new elements had only a limited impact on the actual practice of new town building. (par.11.3)

The misconceptions considering the development of town building through history appear to have been largely caused by the historiographical practice of classifying history into distinct periods, in this case ‘middle ages’ and ‘renaissance’. This classification into periods was originally meant as a model, a tool, for the study of (art) history. But little by little the canonical historical periods have come to be seen as an historical reality. The imperative vision of history as being divided into the separate periods of ‘middle ages’ and ‘renaissance’ or ‘the modern period’, has blurred our view of real developments in the history of town building, and has led to the distorted cliché images of ‘medieval’ and ‘renaissance town building’. The careless use of period classification easily leads to the confirmation of the model, at the cost of a proper view of continuity and gradual developments. (par.11.4)

Periodisation can be a very useful tool for the study of history, particularly specific aspects of it. For instance, periodisation in geologic periods, in cultural eras (such as the paleolithic or the industrial eras), in political-administrative eras or ruling dynasties can be very sensible and helpful, as long as we do not take the periods as absolutes. It seems, however, that the classification into art historical style periods, such as roman-esque, gothic, renaissance, mannerism, baroque, etc., which in itself is quite subjective (as the distinctions are not very clear or generally accepted), has led to a lot of confusion and unwanted connotations being associated with the period-terms. This confusion has become even greater as the terms for the styles and style-periods of art historical origin have found their way into other historiographical disciplines. (par.11.4)

15 See pars.0.1.1, 0.2.2, 10.2, 10.3.
Based on the study of the history of town building one can conclude that it is obvious that the classification into the traditional art historical style-periods or even the more general historical periods of ‘middle ages’ and ‘the modern period’ is, for the most part, quite senseless. In my opinion we should be very careful with periodisation, and particularly with the traditional art historical style-periods. This goes for the study of the history of town building, but also for other historical disciplines. In general, it would be wise to use more neutral time indications than the terms applied to the traditional (art) historical periods with all their connotations, and we should not immediately classify history into periods or styles without there being a concrete necessity to do so. We should keep an open mind, and we must try to use the historical matter, event or thought under consideration to teach us about history, instead of forcing it into our view of history before it can tell us its story. (pars.11.3, 11.5)

12.2 Concluding remarks

After the foregoing summary of the introduction and chapters 1 to 11, this study will conclude with a number of remarks following from what has been discussed before. A number of aspects and outcomes of this study will be highlighted and examined in a wider context than was possible in the foregoing chapters. Finally, some suggestions for further study will be offered.

12.2.1 Creating an overview of complex history: how historical generalisations led to erroneous ideas about the history of town building

Our view of history is, to a large extent, determined by our present-day situation and our experience of it. But, conversely, what we know of our history determines for a large part the vision of ourselves and our world. This is also true for the present subject. The view of historical town building in Europe in about the 12th to 16th centuries, as expressed in many publications, is not just based on the historical material and written sources, but often also, to a large extent, on mental images of the present and of history in general, and in this case more specifically the periods of the ‘middle ages’ and the ‘renaissance’.

Thus, many people over the last two centuries or so believed that really purposeful and rational town planning could not have existed in the ‘middle ages’, since it is generally supposed that ‘the ideal city’ and the sense of the society as something which can be ‘constructed’ only came with the ‘renaissance’ and that real rationality only came with the ‘enlightenment’. According to other historians, however, the creation of new towns from about the 12th century on could be seen as a typical example of anti-feudal politics on the part of the commercial class. In this view ‘the medieval town’ was regarded as a sort of prototype of the bourgeois society of the 19th and 20th centuries. Another example of an idea which has been strongly influenced by a general view about a historical period at large, is that town planning of the 12th to 14th centuries was mainly determined by considerations of a military nature, thus reflecting the idea of the ‘middle ages’ as a period of almost constant armed conflict, within a chaotic and violent world. These ideas are essentially wrong: though all of them may be partly true, they clearly fail to give an accurate impression of the situation in general.

I believe that the general view of the structure and creation of urban form in the past has been too greatly influenced by constructed visions regarding contemporary (i.e. ‘modern’) society on the one hand, and the idea of the course of history as a succession of distinct periods on the other. People generally want urban form to reflect those constructed visions. That is why many people find it hard to believe that there actually was such a thing as town planning before the 15th century: they often think that towns grew haphazardly or ‘organically’. The problem here is that when we do not know historical facts, we mostly fill in the hiatus according to a holistic view. It is even worse than that: when we do know the facts, we often disregard them if they conflict, or are difficult to fit in, with our holistic view. The point is, of course, that we generalise too much and we do not like conflicting evidence that contradict the categories which we divided our world into: to all too many people the ‘middle ages’ are dark and superstitious, whereas the period of the ‘enlightenment’ is luminous and rational, penetrating into the deepest corners of society. Such bluntly generalising
views are very static and are cherished by the general public because they make the world and its history easily comprehensible. At least, that is what people silently hope; but in actuality such over-generalisations merely provide a largely false impression of things.

12.2.2 Individual cases versus general conclusions and classifications

Hundreds of new towns, or possibly even thousands, were created in Europe in the period of about the 12th to 15th centuries, and particularly in the period of about 1200 to 1350, which I have called ‘the high-period of town foundation’. This was the main period of urbanisation in Europe before the industrial revolution. Of course, I could not include all the new towns created in this period in this study. Instead, I have given closer attention to three groups of new towns of the period in three specific regions, and I have tried to give an impression of the differences and the similarities between them. In chapters 5 to 11 other towns from other regions in Europe were also considered, at least to the extent that they could provide information relevant to the specific subjects treated in these chapters.

It clearly appeared that all the towns were (and are) different, despite the fact that there are many parallels. No two have identical plans, and their three-dimensional form and history are even more different. This even holds true for the time shortly after their creation. Among the towns there are various significant differences, and there are various cases that are quite unique in certain aspects. This does not mean, however, that we cannot make general remarks about the group of newly founded towns as a whole or phrase conclusions that are valid for the vast majority of the towns: that is precisely what this study is about. Nevertheless, we have to be very careful with approaching the creation of new towns in the period under study as a ‘standard model’ or even a set of standard models: it should always be kept in mind that there are exceptions and variations.

For that reason, I have explicitly chosen not to follow the typological approach that has become more or less common for the study of urban form in the 11th to 15th centuries, and for that reason the conclusion in the last chapter was negative in its appreciation of the traditional scholarly approach of ‘medieval town building’ as opposed to ‘renaissance town planning’ or ‘modern town planning’. These approaches are remnants of typically 19th-century scholarship that are not, or no longer, helpful for a good understanding of the history of town building. In the 19th century systematisation became the essential program in the fields of science, philosophy and politics. It was believed that systematisation could order, explain and improve the world. One of the most influential examples of this was the systematic classification of living creatures by Carl Linnaeus. Other examples, some of which were inspired by the Linnaean system, are the systematic classifications of chemical elements (the periodic table), climates, soils, languages, races, and human skulls. Systematisation also became a primary aim and instrument in the new academic disciplines of history, art history and geography, and this resulted in, among other things, the systems with which we are concerned here: the town plan typologies and the periodisation of (art) history put forward by architects, geographers and (art) historians.

In various disciplines, this preoccupation with systematisation has led to negative or even disastrous results (e.g., in psychological typology, phrenology, and ethnology), and by now it is clear that many facets of reality are impossible to capture in simple systems or classifications. This also largely holds true for the classifications of newly created towns of the 12th to 14th centuries on the basis of formal plan types. It is possible to propose such a classification in order to come to an overview of the subject, but it is of very limited use for the study of history, and sometimes it even obstructs the understanding of history.18 In chapter 11 I argued that this also holds true for the periodisation of the history of urban planning, and (art) history in general, into (style) periods like ‘medieval’, ‘romanesque’, ‘gothic’, ‘renaissance’, ‘baroque’ or ‘modern’. These classifications are based on rigid generalisations of complex history, and should not be confused with historical reality.

I believe that it is often wise to try and strike a balance between an individual approach and generalisation. This depends, of course, on the specific aim of the research; but with respect to the study of urban planning in Europe in the period under discussion, a subject of which relatively little is known, it seems by far the best option.

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18 See pars. 0.4.1, 2.10.3.2.
12.2.3 Different perceptions of urban design in the 12th to 15th centuries

The period of our concern is commonly called the ‘middle ages’, or more precisely the ‘late middle ages’. As has become clear in chapters 10 and 11, this period is generally viewed as essentially distinct from the centuries which preceeded and followed it, and this is particularly the case with regard to the historiography of town building.

In the past 150 years there have been four basic perceptions of urban design in the ‘middle ages’, which span a spectrum between completely opposing ideas, varying from ‘no design’ to ‘very complex design’. At one extreme is the idea that there was no design, but only ‘organic growth’. This idea developed as students of ‘medieval town building’ focused particularly on the irregular structures that were appreciated so much as ‘picturesque’ since the 18th century, and as they supposed that people did not yet think rationally in the ‘middle ages’ and were not yet able to shape their environment through coherent planning.19 The second perception is that there was, indeed, design, but that it was purposely irregular and picturesque. Since the late 19th century architects and town planners searched for common principles behind the forms of the ‘picturesque’ urban structures of the ‘middle ages’, in order to be able to apply these principles to their own work. They actually managed to formulate such principles, but they mistakenly assumed that these were the principles the ‘medieval town planners’ had worked from: they believed that the irregularities had been wilfully planned.20 The third perception of urban design in the ‘middle ages’ is that it was simple and largely pragmatic: it was based on the simple geometry of straight lines at right angles, which was often adapted to the form of the landscape.21 The fourth perception, finally, is that the design of the urban plans was highly ordered by the application of complex geometry, largely underlying the design and therefore not directly visible in it. Since the 19th century, scholars have claimed - sometimes explicitly in line with the second perception - that architectural design in the ‘middle ages’ was based on more or less complex geometry. This idea was augmented by various texts of the 10th to 15th centuries which made clear that the art of geometry was very highly valued in philosophy and that it played an important role in architectural design; but it was also, in part, founded on the idea that ‘medieval masons’ used secret methods for their designs. Based on this idea, scholars have tried to reconstruct all kinds of geometrical design methods for specific buildings and town plans. For the most part, these reconstructed design methods are highly complex.22

The various perceptions of urban design in the ‘middle ages’ often have much to do with ideas people have (and have had) of town building in their own time. For instance, Camillo Sitte and particularly his followers, from the late 19th century up to the present, believed that irregular plan forms and curved or crooked streets make for better and more beautiful cities. Almost conversely, the modernist Le Corbusier and his followers from the 1920’s on, believed that highly rational and regular structures with straight lines and right angles are a sign of human rationality and civilisation, on which good and orderly cities are built, whereas the curved streets of the middle ages are only variations of ‘the donkey’s path’.23

In connection with the last three perceptions, all kinds of meanings have been attached to urban form, ranging from the irregular forms giving expression to ‘the medieval soul’, to adaptation to the landscape expressing a sensibility for nature , to an implicit meaning in the striving for regularity and order, to the expression of more or less explicit (though not directly visible) meaning through the underlying geometrical figures being used as symbols, for instance of the holy cross, the divine trinity, the imperial eagle or the cosmos.24

The idea that there was no urban planning at all in the period under discussion is very wrong, although it is true that there were towns and urban units, commonly the most irregular, that were created without a coherent plan. The second idea of urban design in the ‘middle ages’, namely that planning was deliberately irregular and ‘picturesque’, is also wrong. Order and regularity, involving straight lines, right angles and equality or proportionality, were the aesthetic standards that were commonly aspired to.25 Therefore, the third perception, of urban design making use of simple geometry and rational dimensions, ideally regular but for the most part adapted to the form of the existing natural and manmade landscape, provides us with

19 See par.11.1.
20 See par.11.1. Alberti’s praise for the curved street and the labyrinthine street structure in the 15th century was erroneously taken as an important source for this idea. (see par.11.2)
21 See pars.6.1, 6.5, 11.1.
22 See pars.6.2-6.5.
23 See par.11.1; Sitte 1965 (orig. 1889); Le Corbusier 1971 (orig.1927); Lilley 1999.
24 See pars.6.4.4, 6.5 , 8.6.4, 11.1. See also Boerefijn 1999 (2).
25 See par.8.6.
the most adequate view of the practice of town planning in the period under consideration here, the 13th and 14th centuries. But this probably also holds true for the preceding centuries, from about the 11th century on, and in the following centuries, indeed, up to the present time. As for town planning theory in the following centuries, however, this is different, as radial planning (from the 15th century on) and ‘picturesque planning’ (starting with Alberti in the 15th century, but particularly from the late 19th century on) were very important, actually having a considerable - but not decisive - influence on practice. Regarding the fourth perception of urban design in the ‘middle ages’, that it was generally based on complex geometrical methods, our opinion is that this is wrong. However, there appear to be exceptions: from our analysis it seems likely that the plans of four towns, founded by the city republic of Florence in the first half of the 14th century, were indeed designed with the help of complex geometrical methods. Therefore, it seems quite possible that other urban structures were also designed in similar ways, but I have no concrete clues that suggest this being true. As of now, I consider this group of towns to be an anomaly in this respect.

In the development of a newly founded town there were always aspects that were not planned. Many of these were not planned because they were not found to be relevant or they were simply overlooked. Other aspects could not have been planned, as they were the result of circumstances that changed in the course of time. This happened in the period under discussion, just as it still happens in the present (though mostly concerning other aspects). Of course, present-day planning is much more comprehensive, supported by more inclusive projections, which are largely scientifically based. But nevertheless, planning can never be completely comprehensive, because projections can never be all-inclusive and correct, not even in a dictatorially governed state. Thus, there always is a complementary play of planning and spontaneity in the realisation of a new town, or even a new urban extension. In reality there are no completely planned towns, just as there are no towns that have come about completely spontaneously. No matter how random they may seem, distinct elements are always planned, as the land is partitioned consciously and houses are built consciously, although existing structures in the natural and manmade landscape may exercise great influence in the creation of the eventual urban form.

In the 20th century we have learned that meticulous, all-comprehensive planning of new towns can never cater to the change of circumstances over time - and as we probably all know, circumstances of decisive influence can change considerably and unexpectedly within a short period of time. In view of that reality, various town planners have drawn the lesson that it is better to leave many aspects open for detailed planning until the time of realisation of the proposed new urban unit is actually there: flexibility has become a virtue in town planning.

12.2.4 General motives for town foundation and the international system of market trade

In many parts of the world, since at least the third millennium B.C., towns were newly founded and planned by rulers and governments, because it served their needs in one way or another. In Europe, it was particularly in the 13th and 14th centuries that many new towns were founded. The founders were landlords who ranged from those of very high stature, such as emperors or popes, to those of quite limited importance, such as knights or abbots, and, in Italy, civic administrations also founded new towns. These landlords sought to make use of the population growth, the economic prosperity and the developing economic structures of the time, in order to consolidate and increase their power and income. To accomplish this, they used towns as their instruments. In some cases it is known that the local population actively stimulated the creation of a town, while in others it is known that people had to be forced to move from the countryside to a new town.

Beyond this generally formulated goal of the founders – to consolidate and increase their power and income – there are a variety of concrete intended functions of the towns. For instance, some were specifically founded to serve as a fortress, to defend a region or to guard a trade route; whereas others were founded mainly to act as market towns, port towns or administrative centres. But in the end, the prime motive for town plantation was always that the founder gained some advantage from it, be it by collecting more rents

26 See pars.6.3.3, 6.5, 9.6.
27 See pars.10.3, 11.2.
28 See par.11.1.1.
29 A good example of this flexible approach to (new) town planning is the city of Almere, which is built on the newly reclaimed land of the Flevopolder in The Netherlands. (see Brouwer 1999)
30 See par.9.1.
and taxes, by a stronger military position, or by enlarging his territory.

It was not just the towns themselves from which the founders hoped to profit. A town was always planned as central place within an area. Many towns appear to be founded in order to make more profit from a specific area within a lord’s domain and from the people living there, or to get a firmer grip on the area and its inhabitants. Almost all newly founded towns can be seen as ‘colonial towns’ in that sense. The towns ‘opened up’ the adjacent areas of which they formed the principal nodes to more intensive cultivation and interregional trade and, thereby, to more intensive exploitation.31 By way of these urban nodes the areas could communicate with other centres, through markets and fairs, but also through administrative and religious institutions, and sometimes schools.

Thus, the land and the people living on it could be effectively colonised by the lords. But, on a different level, we can also speak of colonisation by a new system: the international system of market trade, which, with increasing speed, opened up local economies. That is not to say that the economies had been completely closed before: there had always been some trade over longer distances. But in the 12th to 14th centuries, with the foundation of many hundreds of new towns in most parts of Europe and the growth of towns and cities in general, interregional contact intensified dramatically: people, goods, techniques and ideas increasingly travelled the roads and waterways in all directions. The concentration of people, activity and capital in urban centres led to domination over the surrounding areas, and through these nodal points the areas became connected to the network of the larger world of Europe, and eventually, via central places of a higher order like London and Venice, even to regions beyond Europe.

12.2.5 General remarks on the results of this study

Looking at the results of this study in general, we have to conclude that, in many aspects, they are refuting in character. Some of the conclusions of our research are:
- The idea that the new towns of the period were primarily founded or designed to serve considerations of military tactics is wrong.
- Almost all of the theories according to which town plans were designed or set out by the use of complex geometrical manipulations are wrong.
- Contrary to what often is assumed in the scholarly literature, there are no concrete indications which suggest that there were professional town planners in the period under discussion.
- The common tendency to classify the towns under consideration into typologies on the basis of their plans generally has not lead to a positive enhancement of our historical understanding.
- The almost generally accepted classification into historic (style-)periods does not make sense for the present subject.

In some sense these conclusions all refute older theories and methods. I hope this will contribute to a better understanding of new town planning in the 13th and 14th centuries, and also in the wider context of the history of urban creation. Partly, I have been able to suggest alternatives for these older theories and methods, but I am aware that these alternatives often are not as straightforward as the older ones. There are, however, also many new results that do not refute older ideas, but contextualise them or focus, enhance or develop them.

In historical scholarly research, it is often hard to draw generally valid conclusions or even very solid conclusions for particular cases. For example, our investigations have lead to the conclusion that it is highly likely that complicated geometrical design was used in the planning of the Florentine terre nuove, but that it is very unlikely to have been used in the other cases where such a method has been suggested in earlier literature, as for instance the case of Grenade-sur-Garonne.32 These are things of which we can not be completely certain.

Something we can be more sure of, however, is that basic geometrical regularity was the general ideal of (urban) spatial order in the period under consideration. This appears quite clear, not only from the streets that were actually built, but also from contemporary texts which speak of straight and winding streets.33

31 See par.10.3.1. According to Anthony King (1990, p.15) the city is always an instrument of colonisation, because cities control the hinterland, need the hinterland’s surpluses for their existence, and function as gathering points for surpluses that are exported to other cities.
32 See ch.6.
33 See par.8.6.
Nevertheless, many new towns of the period under discussion have streets that are not straight. In many cases this can be explained quite well from the form of the landscape as it previously existed, but often the actual reasons are not clear, and cannot be known due to the lack of sources. So, in a number of places throughout this book where I actually wanted to explain why a certain street is not straight (or other formal irregularities) I could only hint at circumstances the specific nature of which is not presently known.

This is just an example to show the difficulties of historical research on a subject for which there are so few clear sources. One often has to carefully formulate assumptions that cannot be supported by absolute evidence, but only by analogy or logical reasoning. This is inherent to the study of history. We try to unearth what happened in the past, with the explicit knowledge that we can never know everything, since sources are scarce, often hard to interpret and not always reliable. And therefore we sometimes have to fill in obscurities and hiatuses with surmises. I deliberately made many such surmises, and I hope they are right; but if they are not, I hope that they will be contested in future scholarly publications that contribute further to the understanding of the creation of our world.

12.2.6 Suggestions for further research

Many aspects of what I have been dealing with in the foregoing chapters deserve more detailed research. In this section some of these aspects, which seem especially interesting or full of potential, will be briefly pointed out.

With so many similarities in the politics of founding and planning of new towns in many different regions of Europe, one of the most interesting questions is: did these similarities come about? I feel that I have not been able to give this problem the amount of attention it deserves. It seems most likely that the similarities were largely the result of imitation and, to a certain extent, of the actors independently arriving at the same solutions to given problems. Concerning the aspect of the town charters, which in many cases are our oldest written sources concerning new towns and which have been studied relatively well, this is quite clear. The regulations described in the legal charters, and often even complete charters, mostly appear to have been taken over from the example of an older town. But regarding the question of where the inspiration for the creation of a new town and the method of realising it came from, there is much less clarity. Most likely, new towns were inspired by successful examples. Sometimes, or possibly often, the source of inspiration was the same town as the one from which the legal charter was taken over.

But, in order for there to have been inspiration from other towns there must have been communication. The creators of new towns must have seen successful examples or they must have been informed about them. It would be very interesting for us to know how this worked: to what extent were examples followed and how was the information about those examples communicated? These questions are very hard to answer, however, because, once again, the contemporary sources barely shed any light on this matter.

With so many newly founded towns throughout Europe in the 13th and 14th centuries, one would expect more evidence of communication about the subject of ‘new towns’, or more precisely ‘founding new towns’ or possibly even texts on the subject of ‘how to found a successful new town’. For instance, I would expect that there were more written descriptions of newly created towns, as possible sources of inspiration. Do they not exist, or have I overlooked them? I also wonder if there are other texts that advise lords to found

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34 See par.9.2. It must be mentioned, however, that it is still not completely clear to me how it is that urban rights and laws over almost the whole of Europe showed so many similarities, as I have not been able to find any literature that gives a clear overview of the development of urban rights in Europe in the period.

35 For instance, it has often been suggested or claimed that towns in the regions around the Baltic Sea were strongly inspired by, or even copied from, the example of Lübeck. In various cases it is clear that this (partly) holds true, at least for the legal aspects of the charters. Apart from that, however, these suggestions and claims must be regarded critically, as it appears that various scholars have too easily thought in terms of ‘example’ and ‘imitation’, on the basis of more or less superfluous correspondences. (see Hammel-Kiesow 1995)

36 As described in chapter 7, various scholars have suggested or claimed that professional town planners travelled around and created towns in different places, and these people would have been important in spreading knowledge of examples. But apart from very sporadic information on a very limited number of people who worked on the realisation of more than one new settlement, there is no evidence for this assumption. (see pars.7.1, 7.9) Comba (2004) suggests that podestà’s of city-states were important in spreading knowledge of town foundations among north-Italian city-states in the 13th to 14th centuries. The evidence of their involvement in new town planning is, however, very thin.

37 The only examples I know are Marco Polo’s description of Dadu (Tai-Tu), nowadays Beijing, where he stayed in 1275, only about a decade after it was created (see par.8.6.3; Yule & Cordier 1915, pp.374-375) and Fra Salimbene’s description of Manfredonia (southern Italy), which he wrote about 30 years after its foundation. (Guidoni 1992 (II), p.81) But these texts are much more than just descriptions of newly created towns, as they are parts of an account of a personal adventure and a chronicle respectively.
towns, such as St. Thomas Aquinas’ ‘mirror of princes’ De regimine principum.\textsuperscript{38} Although this text was never finished, it was copied and it seems to have been fairly influential on other political treatises.\textsuperscript{39} I have no idea, however, if this text, and possible other texts of the same genre, actually influenced lords to found towns, directly or indirectly. It would be very hard to investigate, but it surely seems like an interesting subject for further explorative research.

Here, I also want to draw attention, once more, to Francesc Eiximenis’ late-14\textsuperscript{th} century description of what form ‘the well-built and beautiful city’ ought to have. The text was originally written for the councilors of the city of Valencia as part of a political treatise.\textsuperscript{40} In fact Eiximenis describes a sort of ‘ideal’ urban form, most probably partly modelled on the Heavenly Jerusalem as described in the bible.\textsuperscript{41} Being written in the 1380’s this text is too late to have influenced the form of the majority of the newly created towns of the period under consideration. But it is quite possible that Eiximenis was not completely original in the treatment of this subject as such, or that he did not create this text entirely by himself. He may have been influenced by earlier texts on ‘ideal’ urban form. If this assumption is right, it is quite possible that such texts had an influence on lords or planners in their ideas about town planning in the period of the 12\textsuperscript{th} to 14\textsuperscript{th} centuries. In our opinion it would be an interesting, though demanding, direction for further research to try and find out if there actually were such texts. Even small positive results in this direction may lead to important conclusions.

This is not to say that written texts were all-important. Whether or not we have these sources, I think we can be quite sure that much, or probably most, of the information about urban creations was transmitted orally and that much of the inspiration for them came from direct knowledge of successful examples. But still, contemporary written texts are vital to our understanding of how people thought about things. Therefore, I hope that medieval historians will engage in explorative research on this subject in the future.

Another subject that deserves further research is the question of why some new towns have very regular and others very irregular structures. In this study various possible reasons are already given in paragraphs 8.6 and 9.6. It might be especially fruitful to do more research on one specific aspect of this issue: whether it is actually true that towns that were created in a short period of time had more regular structures than those that took much longer to get filled in with settlers and buildings.\textsuperscript{42} In other words: can it be positively demonstrated that there is a relation between the duration of the realisation process of a new town and the regularity of the urban structure? Detailed archaeological data will be essential for research in this direction.

It would also be interesting to do some more research on the analysis of the design geometry of the terre nuove fiorentine. Particularly intriguing would be to confirm whether or not our conclusions on that subject remain valid, after accurate measurements are taken in reality instead of from paper plans. And if so, it would also be interesting to do some more research on Guidoni’s theory of the proportioning of palazzo facades in 13\textsuperscript{th} century Tuscany by way of the quarto di cerchio and its possible relationship to the design method of the town plans.\textsuperscript{43}

Of course, if there are other possible cases of town plan design by way of complex geometrical constructions which are not known to me, these should also be examined closely. All the more so if the suggested measurements in reality would leave our conclusions regarding the four terre nuove correct, as it is strange and unlikely that these towns would be the only ones designed by use of such complex geometrical methods.

The material treated in this study is primarily concerned with western and southern Europe. This is mainly because of a pragmatic consideration: for these regions there is relevant literature which I can read. It is a fact, however, that hundreds of new towns were created elsewhere in Europe, particularly in Central-Eastern and Eastern Europe. This is a very large area with many different countries at present, from Poland

\textsuperscript{38} The book was probably written around 1265 for the king of Cyprus, but it was never finished. In this work it is claimed that towns and cities are the best place for man to live, and that the foundation of cities is therefore one of the most important functions of a king. The text deals extensively with the foundation of towns, among other things, with regard to their siting and political organisation. Not much is said, however, about the actual creation of a new town or about urban form. It is not impossible, however, that this was planned but not realised, as the book remained unfinished. (Aquinas 1980; Aquinas 1997, pp.117-146)

\textsuperscript{39} St. Thomas also wrote other interesting things on the organisation of society, above all of urban society, which influenced many others, like Peter of Auvergne in his Política (from the late 13\textsuperscript{th} century; Lanza 1994), Egidius Romanus in his De regimine principum (from the second half of the 13\textsuperscript{th} century) and Bartolo da Sassoferrato’s De regimine ciutatum (from the first half of the 14\textsuperscript{th} century). (Guidoni 1992, p.16)

\textsuperscript{40} See par.8.2.1. The book was originally written in 1383-84 as Regimen de la cosa pública (edited by P. Molins de Rei, Regiment de la cosa pública. Barcelona, 1927) for the councillors of the city of Valencia (Garcia y Bellido c.s. 1968, p.152), and was re-edited in the twelfth book of Eiximenis’ encyclopedic work, El Cretat, under the title The Principy Gouverment: of the cities and the public cause. The specific description occurs in chapter 110: Which form should the beautiful and well-built city have (Quina forma deu haver ciutat belle e ben edificada). (re-edited: Puig i Cadafalch 1936)

\textsuperscript{41} Revelations 21:9-27; Ezekiel 48:30-35. See par.8.1.1.

\textsuperscript{42} See par.9.6.2.

\textsuperscript{43} See par.6.4.1 and fig.6.25.
to Greece to Russia, for which I have not been able to find or read much relevant literature. In part this is because I do not read the languages and in part because the literature has not been available to me, because these countries have long been more or less isolated from Western Europe. It is also possible that there has not been much research into the subject under consideration in these countries. This may also hold true for other regions which are of great interest, but on which I have not found much relevant literature, such as the Iberian Peninsula and Scandinavia. But nevertheless, it would surely be worthwhile to do research on the foundation and planning of new towns in the 13th and 14th centuries (and probably also in the preceding and following centuries) in these regions of Europe. Such a study should preferably be published in English. Possibly, the results could complement the present study; but it is also possible that they would not be in line with our conclusions, which would not make them any less interesting, however.

So, there is still much to be researched. And we should also be aware of the fact that there is also still much interesting material in Western Europe, hidden in archives, behind the younger facades of buildings or buried under the ground. It is possible that some of this material might hold information that could be vital to our understanding of the creation of new towns in the period under consideration.

Finally, I would like to suggest an instrument for gaining a better overview of the creation of new towns in the period under consideration, and in the earlier and later periods as well. Throughout this book I have claimed that hundreds, and probably thousands, of towns were newly created in Europe in the 13th and 14th centuries. But these numbers are very vague and are mainly founded on research in Great Britain, southwest France and Central Europe. It would be very helpful to have an instrument that would bring together more information on urban creation in the past. I am thinking of a database with basic information such as names, places, dates, founders, plans and sources, coupled to a map (of Europe or, better still, the world) and available through the internet. Preferably, scholars from different countries should contribute to it. With the help of such a database we could get a better view of the spread of newly created towns and of different sorts of towns, for instance when grouped by period, founder, main function, or type of location. This could also facilitate quantitative research into specific aspects of new town creation.

There are, of course, many more aspects, regions and methods that deserve to be given more scholarly attention with respect to urban creation in the past, but I believe that the suggestions given above may specifically lead to results that would help to gain a better understanding of the subject. These are mainly suggestions for research in history, more specifically architectural history. In addition to that, however, I expect that very important results may be gained by archaeological research. There are thousands of sites in cities, towns and former towns which are likely to contain, just below the surface, valuable information on the early stages of the formation of the towns. I hope that many of these sites will be investigated by archaeologists in the future, and that their results will blend with the results of historians, historical geographers and architectural historians in order to reveal a better picture on the creation of towns in the past.

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44 See par.0.2.2, esp. n.44.
45 A good initiative for such a database coupled to a map is to be found on the internet site of the international New Town Institute. (www.newtowninstitute.org) This database is still very limited, as it was only initiated in 2006, and is still particularly oriented on The Netherlands and the 20th century (like the institute itself), but it has the potential to develop into a more complete source of information, particularly when more scholars would contribute, when the data would be defined more precisely and when the metadata would be provided.