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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8 IDEOLOGICAL ASPECTS CONCERNING THE FOUNDATION AND PLANNING OF NEW TOWNS

The previous chapters mainly dealt with the physical aspects and procedures related to the foundation, planning and building of new towns in the high-period of town foundation. Next, this chapter will discuss ideological aspects that were related to the urban settlement as a societal and architectural structure in the period under consideration. These aspects are very relevant to the newly founded towns of the period, since they influenced their creation, their forms and their institutions up to some extent.

The manmade landscape and our view of it are shaped on the basis of ideologies which one may or may not be conscious of. Consequently, ideologies from the past may be ‘read’ from the landscape, historically layered as it is.\(^1\) In this respect, the term ‘ideology’ must be understood as a system of ideas that ideally is integrated into a complete ‘world view’ or an interpretation of the ‘cosmos’\(^2\). Since the organisation of society is a very important aspect of the human world view the landscape of settlement, being the stage of human society, must necessarily reflect ideology, and particularly ideas on the organisation of society. 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.\(^3\)

This chapter will first deal with ideologies concerning the civic society, in general as well as concerning its spatial form. In the second part of the chapter, aesthetic ideologies will be considered in relation to the urban form of newly planned towns and newly planned urban ensembles in existing towns.

8.1 Ideal societies

8.1.1 The Heavenly Jerusalem and the godly city on earth

In Christian thought, the ultimate ideal of a society is heaven, where all truly faithful Christians are believed to live after the Last Judgement. In the bible, this Christian heaven is described in the form of the Heavenly Jerusalem.\(^4\) It is described by the prophet Ezekiel as well as by St. John in the Apocalypse, where it is named ‘the Holy Jerusalem’. In the Apocalypse this city descends from heaven after the Last Judgement, while according to Ezekiel’s vision the city is built by God, and the Israelites are guided there after He has defeated the people of Gog. In both visions the city is described as having a square plan with its sides oriented to the cardinal directions, built out of the most precious shiny materials. The city is walled and has twelve gates that are named after the tribes of Israel and are distributed equally over the four sides of the square outline.\(^5\) (fig.8.1)

In the period under consideration, the Heavenly Jerusalem formed the ideal society that Christians strove to inhabit, uniting the whole of (Christian) mankind after the Day of Judgement. But according to the immensely influential book De civitate Dei, written by the church father Augustine between 413 and 426 AD, the ideal Christian society should also be sought after in the terrestrial sphere, by organising the society in accordance to the love of God.\(^6\) Augustine described this ideal terrestrial society in the form of a civitas. Due to the immense influence of St. Augustine’s work it became the ultimate religious and societal goal in the Christian world to realise the godly city on earth, as a pre-apocalyptic ideal society.\(^7\) This ideal was most literally followed in the monasteries that were founded since the fifth century, but it was also followed in the organisation, liturgy and architectural form of the Christian church, as well as in the organisation of Christian states in general.\(^8\)

\(^5\) According to Saint John the 12 foundations of the walls carry the names of the apostles, and in the city there is no darkness, nothing impure, no horror and no lies. And there is no temple in the city, because the Lord is all-over. According to Ezekiel its name will be ‘the Lord is there’, and the length and width are 4500 ells. According to St. John, however, the city is a cube, because its length, width and height are 12000 furlongs. (Revelations 21:9-27; Ezekiel 48:30-35)
\(^7\) Bauer 1965, pp.1-4.
\(^8\) For instance, the architectural form of a church could represent the godly city in the entrance, which was often built in the form of a city gate since the Carolingian era.
The form of the ideal society in both the Heavenly Jerusalem and the Civitas Dei was that of a city. It is not surprising that these images, which were so important in Christian thought, had some impact on actual towns and cities, as the current worldview was to see the transient world as a transcendent image of the divine plan, wherefore the earthly city was often seen as a reflection of the Heavenly Jerusalem. Thus, according to Augustine, the civitas terrena was an imago of the caelestas civitas, and hence the cives of the earthly city were also transcendental inhabitants of the heavenly city.

The form of the Civitas Dei is not described by Augustine, but mostly it was depicted in the form of a round or polygonal city wall with towers and with saints in it. This was probably because the circle was seen as the perfect and therefore truly divine form. This form represented the form of the heavens, and according to Augustine it symbolises virtue, being the essential basis on which the Civitas Dei should be built.

8.1.2 Influence of the images of the ideal Christian societies on the perception of real urban settlements

The clearest accounts of imitations of the Heavenly Jerusalem and the Civitas Dei in real towns and cities can be found in texts, where cities such as Kiev and Constantinople were called New Jerusalem, or cities like Rome, Trier, Cologne, Mainz, Prague and Strasbourg were called sancta civitas in their official seals and documents. These references were based on the history and functions of these cities, rather than on their architectural form. It is clear, however, that one of the goals of building churches with many high towers and impressive exteriors in a city, was to emit the image of a god-fearing and blessed community. It is illustrative that in many contemporary panegyrics on towns and cities the number and height of the towers is stressed and exaggerated. According to Bauer the urban form could also refer to the ideal cities of Christianity in a more general sense by way of beauty and order. In his opinion, the creation of the city-states of the 11th to 15th century was even to a considerable extent influenced by the images of the Heavenly Jerusalem and the Civitas Dei.

Since about the 14th century, the Heavenly Jerusalem was often depicted in the form of a church building. (Bandmann 1951, pp.62-112; Konrad 1965, p.534) As to the form of the state: among others the Carolingian empire has been interpreted as a conscious attempt to realise the Augustinian vision. (Konrad 1965, p.520)

10 Haverkamp 1987, p.144. For other biblical passages and patristic commentaries on the Heavenly Jerusalem, see Orsini 1994, pp.421-422.
12 Cardini 1994, p.246; Haverkamp 1987, pp.123-124. It seems that these cities were called sancta civitas particularly because they contained many monasteries and churches.
13 The earthly Jerusalem and Rome and other cities with particular important roles in the history of Christianity, were commonly thought of as closer in resemblance to the Heavenly Jerusalem than other cities. (Konrad 1965, pp.527, 531)
15 For instance by the ‘anonymous Genovese’ on the city of Genova: ‘[...] con terre in grande quantitate, chi tuto almena la citar [...]’. (Finotto 1992, p.83) Bocaccio especially praised Pavia for the great number of its high towers (Guidoni 1981 (II), p.147), and a Florentine writer boasted of his city having more than 150 towers of over 120 ells height. (Friedman 1988, p.215, n.45) For more examples, see Frugoni 1991, pp.79-80.
16 Bauer 1965, pp.2-17.
In some panegyrical descriptions of cities of the 12th to 14th centuries, the so-called laudatio urbiurum, references can be found to the form of the Heavenly Jerusalem. In a laudatio of the 14th century, for instance, Florence is described as having 12 city gates, while it actually had 15. A similar ‘mistake’ can be found in a 12th-century description of the city of Milan.  

There are also cases for which it is likely that the actual forms of town walls were influenced by the heavenly image. In Cologne for instance, the town walls, which were begun in the late 12th century, were furnished with 12 gates. This is likely to have been a symbolic reference to the Heavenly Jerusalem, since two of the gates seem to have been rather unpragmatic, as they did not really open up to radiating streets. At Aachen, there were also 12 gates since the enlargement of the wall circuit in the middle of the 13th century, which number may also have been chosen in order to refer to the heavenly city. 

Many towns and cities were somehow organised in a 12-part (or sometimes 24-part) scheme. These quantities may be found, for instance, in the number of administrative units or neighbourhoods, the number of aldermen or consuls, or the number of guilds. This may also be seen as a reference to the Heavenly Jerusalem, as its 12 gates also stand for the 12 tribes of Israel and the 12 apostles. This symbolism is explicit in a chronicle from the first quarter of the 12th century concerning the city of Bergamo in northern Italy. It describes how there is an unparalleled respect for the communal laws in this city, and that these regulations are watched over by twelve viris sanctis who constantly meditate the sanctas leges. Since sanctity and the number of twelve officials are clearly related here, this must be a reference to the twelve apostles in the Heavenly Jerusalem.  

In written and iconographic sources from about the 11th to 15th centuries, one can often find the outline form of existing cities described or depicted as circular in shape. These were not the real forms: they were either gross simplifications of the actual form or complete fantasies. The most well-known examples are plans of Jerusalem itself, that is to say the earthly Jerusalem. (fig. 8.2) According to many scholars, the circular outline refers to the Heavenly Jerusalem. This is very well possible, since the Heavenly Jerusalem was often depicted in round form. (fig. 8.3) Probably, this form was preferred above the square because the circle was also regarded as the perfect geometric form and besides that also as the form of the heavens.  

Because of this possible symbolic meaning, settlements of circular or more or less circular shape (in descriptions, depictions or in reality) have received relatively much attention in the art historical study of urban planning in the past. Most students of these settlements in the Europe of about the 5th to 15th century have tried to connect the outline shape with the Heavenly or the terrestrial Jerusalem. Some scholars believe that it was the ideal of every founder or planner to make a new settlement circular in form, and that other forms were only chosen for being easier to achieve, or alternatively, that they were formed ‘organically’. Most of the supposedly circular settlements that would have been created after this image of Jerusalem, however, are not really circular but rather ‘rounded’ in form. And mostly these rounded forms are clearly influenced by the

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18 Haverkamp 1987, p.137. According to Roek (1989, p.215) the same principle was still motivating in the early 17th century, when Elias Holl built the magnificent gates of Augsburg, which had a symmetrical rather than a defensive function.  
20 Braunfels 1953, p.59. A more important meaning of this division into 12 or 24 parts, however, seems to be the general cosmological duodecimal partition. The number 12 thus stands for completeness or wholeness, similar to the 12 hours of the day, the 12 months of the year and the 12 signs of the zodiac, which are, of course, all related as divisions of time and space. It is likely that this cosmological partition into 12 parts also had a certain influence on the number of tribes of Israel, the number of apostles and the form of the Heavenly Jerusalem. (see paras. 6.4.3.1, 6.4.4) The phenomenon of the division of towns and cities into 12 or 24 parts may have been diverted from the Byzantine tradition to divide the urban population into 12 parts for the sake of military organisation. Here the cosmicoric connection appears in the term for the constituent parts: hora or ore, which means hours. (Guidoni 1978, pp.93-99; Heers 1990, p.330) It is interesting that the 12-partition of the city can also be found in other cultures. The cities of ancient China, for instance, often also had 12 councillors, and Plato’s Atlantis was also divided in 12 parts (Johnston 1983, p.211). Just like the ancient Sassanid city of Gur (presently in Iran), in which the parts were named after the signs of the zodiac (Egli 1959, pp.263-265; Johnston 1983, p.16).  
21 Frugoni 1991, p.74. In chapter 6 it has been mentioned that it is possible that the number of 24 towers at San Giovanni and Terranova may also have been meant as a reference to the Heavenly Jerusalem. Furthermore, the 144-eell length of the base-line of the probable geometric design method of the plan of Terranova may have been inspired by the description in Revelations 21:17, according to which the walls of the Heavenly Jerusalem measured 144 eells in width or in height. (see para. 6.4.2) It was also suggested in chapter 6 that the polygonal form of the basic figure of the probable geometric design method of the terranova, with 12 or 24 sides, may have been inspired by the likeness to the contemporaneous round or polygonal depictions of the Heavenly Jerusalem or the Civitas Dei. (see para. 6.4.3.1)  
23 See para. 6.4.3.1, n.155. Instead of a circle, the shape sometimes was depicted as a regular polygon with, for instance, 12 or 24 sides.  
26 For instance: Müller 1961, pp.53-58.
topography of the landscape, such as the form of a more or less round hill or a bend of a meandering river.\textsuperscript{27}

The settlements that are actually likely to have been purposely built in circular form, are mostly not influenced by Christian imagery: for instance the round settlements of the Vikings, such as Trelleborg (fig.8.4), or the traditional Slavic dědiny settlements.\textsuperscript{28} There are also remnants of circular settlements on the Northsea coast of the Low Countries, such as Burgh, Middelburg and Oost Souburg in Zeeland, which were probably built as defensive forts against Viking raids.\textsuperscript{29} But there too, it is unlikely that these settlements have anything to do with the Heavenly or the earthly Jerusalem, since they appear to have been forts rather than towns.

Since the circle and the regular polygon, as a derivative, must have been regarded as ideal outline forms for the city, it is quite remarkable that no towns were built in truly circular or regular polygonal (for instance dodecagonal) form in Christian Europe until the 15th century. When new towns had regular outline forms, they were always rectangular.\textsuperscript{30} One might think that this may have been a reference to the Heavenly Jerusalem described in the bible. It must be doubted, however, whether that is right, since the towns mostly have an elongated rectangular outline and only rarely a square one, and since the number of gates of these towns is never twelve.\textsuperscript{31}

The Heavenly Jerusalem could also be represented in real towns and cities by small elements, which did not have a significant influence on the total urban form.\textsuperscript{32} In the year 958, for instance, a cross was erected in the market square of the ancient German city of Trier, as a symbol of immunity during market hours, the so-called market peace.\textsuperscript{33} This cross also acted as a direct reference to the Heavenly Jerusalem, because it had a lamb depicted on it, and according to the biblical Apocalypse ‘Lamb and tree of life stand in the centre of the heavenly city’. Thus, this cross made Trier into a symbolic depiction of the Heavenly Jerusalem.\textsuperscript{34}

\textsuperscript{27} Lavedan & Hugueney 1974, pp.7-10, figs.1-26.
\textsuperscript{28} See Lavedan & Hugueney 1974, pp.7-8; Müller 1961, pp.102-103.
\textsuperscript{29} Trimpe Burger 1973.
\textsuperscript{30} Braunfels 1953, p.48.
\textsuperscript{31} In this respect, the situation in Europa was very different from the situation in the East, where it is all too clear that many towns and cities were conceived as formal copies of the divine heavens, in whole or in specific aspects. (see Heine Geldern 1959; Wu 1963) It is remarkable that many towns and cities that were built in the East are actually quite similar to the ideal models of the Christian West. For instance, the imperial capitals of ancient China with their more or less square outlines and three gates on every side (see Skinner 1977, p.48), or the Persian Sassanid capital of Gur, which is round and radially divided into twelve sectors with separate gates. (Egli 1959, pp.259, 363-364; Kostof 1989, pp.163-164; see also Johnston 1983, pp.14-220) Probably, these cities and the ideal cities of Christianity had common roots in ancient cosmology. One of the main reasons why such urban forms were not realized in the West may be the fact that the towns that were purposely newly created there were all relatively insignificant compared to the newly created capital cities of the East, among others due to the fact that the mightier rulers in Europe resided in castles rather than in capital cities. Another important difference is that kingship, religion and the view of the cosmos were more closely tied up in the East than in the Christian West, where the ultimate religious goal essentially lay in the future, following the cosmic cataclysm of the apocalypse.
\textsuperscript{32} See Borger 1975.
\textsuperscript{33} See also par.9.16.
\textsuperscript{34} Haverkamp 1987, p.132. Bandmann even suggests that every town with a cross on a column in its centre explicitly referred to the Heavenly Jerusalem. (Bandmann 1972, p.86)
8.2 Urbanism in ecclesiastical thought

In the high-period of town foundation, new towns were created by members of the political elite, such as emperors, kings, princes, bishops, abbots or nobles from the lower ranks. This implies that these people saw political and economic advantages in the foundation of towns; but also that it was regarded as an appropriate thing, or even a good thing, to do for the gentry of contemporary society.

In antiquity the city was generally viewed as being cultured (this is how the word ‘civilised’ originated) in contrast to the countryside, which was thought of as primitive and ill. Since Roman times up to about the 12th century, however, many members of the clergy regarded towns and cities as places of sin and moral decay, and adverse to social order in their organisation. But these ideas changed later on, particularly in the 13th century.\(^{35}\)

In the early 12th century, for instance, Abbott Guibert of Nogent wrote in a negative way about the then new urban communities and the unbounded freedom of their members: ‘Commune! new and detestable name. By it people are freed from all bondage in return for an annual tax payment.’\(^{36}\) Later in that century Saint Heribert doubted if any saint had ever founded a town, drawing attention to the negative biblical scenes of the foundation of Enoch by Cain and Babylon by Nimroth. According to Saint Bernhard, Paris was equal to Babylon in moral respect.\(^{37}\) But already in the 9th century the influential cleric and encyclopaedist Hrabanus Maurus gave a binary reading of the city and its parts in his exegesis of the way the city should be interpreted in symbolic sense. This reading was positive on the one hand and negative on the other, but it seems that the positive symbolism prevailed in Hrabanus’ mind.\(^{38}\)

In the 13th and 14th centuries, thinkers in the field of political theory formulated theories of society as it would ideally be organised in their view. Most of them largely based their theories on the ancient philosophers, primarily Aristotle, Plato and Augustine. Inspired by these authorities, they saw the city in its earthly form as a possible ideal society. Very important among these thinkers was St. Thomas Aquinas. Around

\(^{35}\) Meier 1994, pp.24-54.
\(^{38}\) Finotto 1992, p.52.
the middle of the 13th century, he wrote an educational work for a prince, a so-called ‘mirror of princes’, in which he stated that the city is the ‘ [...] best form for the material and moral existence of man.’

St. Thomas actually claimed that the foundation of cities is one of the most important functions of a king, and he even compared this to the foundation of the world by God. This is reflected in the contents of the unfinished book, which deals extensively with the foundation of towns. Unfortunately, St. Thomas does not discuss the material form the city should have.

Around the same time, a similar positive perception of the phenomenon of the city can be found with Thomas’ former teacher, Albertus Magnus. In a sermon delivered in Augsburg he preached ‘The teachers of faith are called a city, because like a city they give security, urbanity, unity and freedom.’ In the early 14th century, the political philosopher Remigio de Girolami even wrote that a person has to be a civilian in order to be a good Christian and a good human.

Around the same time the popular preacher Fra Giordano da Rivalto preached in Florence that ‘City (civitas) sounds so much like love (caritas), and for love people built themselves cities; because humans enjoy staying together.’ Later in the 14th century, the Franciscan scholar Francesc Eiximenis wrote that wisdom has its home in the city and that there is less sin in the city because there is closer control and more guidance. Eiximenis was right in this, at least in principle, because within the urban confines there were more rules that guided the behaviour of the individual, and more institutions that looked after it. In most towns, for instance, it was forbidden to carry arms or to injure people, because the town was a locus pacificus. In many cities of the 14th and 15th centuries there were even regulations that forbade people to show off their wealth too much, as clothes and jewellery, feasts and funerals were limited in their abundance.

John Pecham, archbishop of Canterbury and important advisor to King Edward I of England, even recommended urban life to his king as a way of civilising the conquered Welsh people: ‘First of all, sire, the savagery and other evils arise from this cause, that they do not live together but dwell far apart from each other. And so, sire if you wish to make them behave in accordance with God and the world, and take away their savagery, command them to live in towns [...]’. With this, the archbishop offered the king a legitimisation to colonise Wales and found the towns there that are treated in chapter 1. Around the middle of the 15th century, the Castilian diplomat Sánchez de Arévalo wrote in his Suma de la Política that it is much better for ‘justice and virtue’ to found new towns, than it is to institute a new administration in conquered towns and cities. Both methods had been applied in the Iberian context of the reconquista on the Mores in the centuries before. But for Sánchez de Arévalo new structures were to be preferred above the re-use of old ones, in order to destroy the old social structures and habits that were tied to the existing spatial structures.

39 Thomas Aquinas, De regimine principum. II, 4 (Aquinás 1986), p.601. This work was probably written around 1265 for the king of Cyprus.

40 Aquinas 1997, II, 2, pp.117-119. Thomas also quoted Vegetius and Ecclesiasticus in asserting the importance of the foundation of towns (II, 5, p.134) and he mentioned the examples of Ninus founding Nineve and Romulus Rome (II, 2, pp.117-118). Aquinas also wrote other interesting things on the organisation of society, foremost urban society, which influenced many others, such as Peter of Auvergne (Política, late 14th century; Lanza 1994), Egidius Romanus and Ptolemy of Lucca (both wrote texts called De regimine principum in the late 13th century) and Bartolo da Sassoferrato (De regimine civitatum, first half of the 14th century). (Ptolemy of Lucca 1997)

41 Le Goff 1983, pp.45-50; see also Meier 1994, 35-47.


43 ‘Città (civitas) tanto soma come amore (caritas), e per amore s’edificano le cittade, perocchè è dilettare le gente di stare insieme.’ (Braunfels 1953, p.23; see also Meier 1994, p.49)


46 Finotto 1992, pp.82-84.


48 Iglesias 1985, p.35.
The fact that the urban population was taken seriously by the Catholic church, is clearly signified by the official papal approval of the mendicant orders of the Franciscans and the Dominicans in the early 13th century, and the Augustinians and Carmelites somewhat later on. These new monastic orders established their religious houses exclusively in urban centres. With the new spiritual guidance that they offered the town, it certainly became a more decorous place of living in the view of the conservative ecclesiastical movement, which had been largely anti-urban in earlier times. Increasingly, towns developed their own specific religious life, with their own local (patron) saints, religious feasts, devotional brotherhoods, sermons for large crowds and specific liturgies with processions.

8.2.1 The ideal city according to Francesc Eiximenis

In the second half of the 14th century the Aragonese cleric Francesc Eiximenis (1340-1409) wrote a text that has become the most explicit and therefore the most important European source on town planning theory in the West since the Roman architectural treatise of Vitruvius (c. 30 B.C.) and before the treatise by Alberti. (1452). Unlike these other two sources, which dwell on the subject of town planning as being part of the discipline of architecture, Eiximenis has a clear model in mind of the way a city should ideally be laid out.

Eiximenis was a Franciscan friar who was highly respected at the Aragonese royal court for his knowledge of philosophy, which was mainly based on Aristotelian-Thomistic and Augustinian sources. In his encyclopaedic work El Crestià (The Christian), of 1381-86, the twelfth book is titled The princely government, of the cities and the public cause, and the 110th chapter is dedicated to the question ‘Which form should the beautiful and well-built city have’. Strangely enough, this important source has only very rarely been taken into consideration in the writing of the history of town planning.

As might be expected from a member of one of the mendicant orders, Eiximenis’ vision of life in the city is essentially positive. He writes that living in the city is best for the fulfillment of man’s material and spiritual needs, and that the ultimate goal of living together in a city is to honour God. He wrote: ‘‘The city is a congregation in agreement of many participating persons and traders and inhabitants, and this congregation must be well composed and honourable and ordered for a virtuous life.’ If the city’s organisation and functions would follow God’s law, it would accomplish its earthly mission and it would prefigure the ‘final public cause’ or the Heavenly Jerusalem.

According to Eiximenis the city should be well-ordered in three senses: the spiritual, the temporal and the material. He amply discusses different aspects of civic society as it should be according to him, but here we will only discuss the architectural form of the ideal city that he describes. It should be kept in mind here that, as far as known, he was the first to record such a description since Roman times.

Eiximenis wrote that ‘‘just like the Greek philosophers say, after the wise Christians had adjusted some things, and they briefly said that every beautiful city should be square: because like that it is more beautiful and more ordered’’. The

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According to Eiximenis the city should be well-ordered in three senses: the spiritual, the temporal and the material. He amply discusses different aspects of civic society as it should be according to him, but here we will only discuss the architectural form of the ideal city that he describes. It should be kept in mind here that, as far as known, he was the first to record such a description since Roman times.

Eiximenis wrote that ‘‘just like the Greek philosophers say, after the wise Christians had adjusted some things, and they briefly said that every beautiful city should be square: because like that it is more beautiful and more ordered’’. The
wall on every side of the square should be a thousand paces long, and should have a main gate at its centre: 'and from the eastern gate to the western gate passes a great and wide street which traverses the entire city from one part to the other: and the same is true for the one from the principal gate that looks on the midday to the other main gate that looks onto the north wind.' And on either side of the main gates there are secondary gates: 'and it is said that the streets run straight from the eastern gates to the western gates: and those from the south to the north: so the straight and beautiful streets run from each of the secondary gates to the ones on the opposite side.'\(^{59}\) The city has four quarters, and each one should have noble houses and a great and beautiful square. On one side of the city is the princely palace, ‘strong and high and with an exit to the outside of the town wall’, while the cathedral is in the centre, next to the great and beautiful central square which is surrounded by porticoes. Trash, noise and violence are to be suppressed. And in every quarter there is a monastery of one of the mendicant orders. The practitioners of the different professions are to be spread, so that every quarter has its own shops and services.\(^{60}\) And the gates and walls are good, high, great and strong, so that the city is not only defended by the virtue of its citizens but also by the virtue of its walls. Eiximenis goes on to give a relatively extensive description of the form of the walls and fortifications. Finally, he writes that hospitals, brothels and sewers must be located downwind from the city.\(^{61}\)

There are many other aspects in this short text that deserve further study, but in the present context it is particularly relevant that the described city is up to a certain extent similar to the biblical Heavenly Jerusalem.\(^{62}\) Just like the Heavenly City, Eiximenis’ design is square and has three gates on all four of its sides. The writer does not explicitly refer to the Heavenly Jerusalem as a source of inspiration, but the similarity cannot be coincidental. As a Christian from his time, the first ‘ideal city’ that came to his mind simply must have been the Heavenly Jerusalem.

Eiximenis’ description of the form which the ‘beautiful and well-built city’ should have, was no utopia as was the Heavenly Jerusalem itself, but certainly it was an ideal city. Eiximenis explicitly referred to the ideal cities described by the ancient Greek philosophers, and with that he placed his own description in that philosophical context. It is difficult to say whether he really devised and described his design in the hope that this model would actually be followed in practice, or that he rather saw it as a philosophical exercise. In any case, his model was not impossible to realise in practice.

### 8.3 Town foundations aimed at societal reformation inspired by religious ideologies

In the preceding paragraphs it appeared that the city was often considered to be the ideal form of societal organisation. No towns are known to have been actually built as clear formal copies of the Heavenly Jerusalem or the Civitas Dei. But still, these and other ideal cities had a relation with the situation in reality, because they were inspired by reality and, conversely, they inspired reality, although not as clearly influencing their form as Eiximenis’ description might suggest. In the following paragraphs some examples will be discussed of the influence of higher ideals on the foundation of new towns. First, the organisation of urban society will be considered, and then the urban forms that resulted from the higher ideals will be discussed.

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60. According to Torres-Balbas (1954, p.90) and Iglesias (1985, p.39) Eiximenis meant that the different professions were to be located in different streets; but that is not what the relevant fragment of text edited by Puig y Cadafalch (1936, p.2) says.

61. Eiximenis, as quoted by Puig y Cadafalch 1936, p.2.

62. With this described form, the city also has a strong likeness to Chinese imperial capitals (particularly to those where the imperial palace is not placed in the centre of the city, but on the northern side, such as the Tang-dynasty capital of Chang-an, of the 7th to 10th centuries; see Shatzman Steinhardt 1986). It is not impossible that Eiximenis had heard of these cities, since contacts between Europe and China had been relatively intense in the 13th and 14th centuries. It is not impossible, for instance, that the rather vague description of Beijing (Dadu) by Marco Polo had some influence on Eiximenis’ design. (see par.8.6.4)
8.3.1 The town foundations of Count Reinoud I of Gelre

A curious case of town foundation motivated by particular Christian religious ideologies is given by the town policy of Count Reinoud I, who ruled the county of Gelre in the present-day Netherlands and Germany from 1271 to 1318. This count issued a number of odd but very interesting charters and decrees between 1289 and 1312. The ambitions of the documents seem so pretentious, that they are often ascribed to Reinoud’s supposed insanity.63

He founded two new towns and renamed, or rather re-founded, four towns in his county. The first new town was Staverden, planned next to a new hunting-castle Reinoud had himself built in the centre of the largely uncultivated region of the Veluwe.64 The town, indicated as republca and oppidum, was founded 25 March 1298. With the town, a hospital was founded.65 Since the town was not successful at all, nothing is known presently of its originally intended form. But it is clear from the documentation that it was originally meant to become a central place of special significance.

The hospital that was founded with the town was to be governed by a societas that was initiated by the count shortly before. It seems to have been some sort of knighthly order on the model of the knights of St. John, having a crusade as its main goal.66 The count himself was the head of this societas.67 It seems that he also planned the societas to have some sort of academic or theological function.68

On the same day as Staverden, Reinoud founded another new town at or nearby the village of Hathem, at the north point of the Veluwe region. The place was indicated as oppidum and was named ‘Mons Dei’. It was to be peopled with the inhabitants of Hathem. This case is similar in that a hospital was founded at the same time, which was also to be administrated by the societas.69 This hospital seems to have been planned as the head of a group of hospitals that were all named Mons Dei, founded in different places in the region of the Veluwe. These hospitals were probably meant to play a central role in the religious life of the towns they were planted in or that were founded with them.70

The name ‘Mons Dei’ for his new town and hospitals is a clear sign that Reinoud had special intentions of a religious nature with these foundations. The name referred to the biblical ‘Godly Mountain’ Sinai, where the Jews received the ten commandments on their way to the promised land, and to the holy mountain Zion, which is hailed as the invincible city of God in psalms 46-48.71 Saint Augustine was inspired by these psalms when he claimed that the Civitas Dei is the same as the ecclesia that was founded on the mons sanctus, and that this civitas, of which only the most pious Christians are the citizens, is the caput of all other civitates.72 ‘Mons Dei’ also refers to the Last Judgement, via psalm 48 and the prophecies of Isaiah, which say that in the final days God will judge over all people at ‘the mountain of the Lord’.73 In fact, Reinoud appears to have had strong eschatological expectations, and these were probably the main motivator behind Reinoud’s plans and foundations that are described here.74

It seems that the hospitals that Reinoud had founded in 1298 were primarily meant to support his crusading ambitions. In 1306 he founded three more hospitals that were probably all called Insula Dei.75 These foundations, only one of which was actually realised, were still related to his crusading ambitions, but it seems that they were more directly meant to take care for the souls and health of his familia - his relatives and subjects - and the poor from outside this group.76

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63 Schneider 1990; Moors 2000.
64 Reinoud obtained permission for the foundation of Staverden from King Rudolf of Habsburg in 1291. The privilege was restated by the king in 1295 and 1299. (Moors 2000, pp.44-45)
65 In the early documents the town was to be open for settlers from anywhere, except for vassals of the Empire. (Moors 2000, pp.44-45) But eventually, it seems that the town was reserved solely for Reinoud’s own subjects, who would not receive complete freedom. (Schneider 1990, p.16)
66 Schneider 1990, p.21; Moors 2000, p.44. Some years later, this societas was also given the rule over other hospitals, called Mons Dei and Insula Dei (see below).
67 Schneider 1990, p.15.
68 Moors 2000, pp.44-45. The terms societas, or collegium, and its associated canoneficii in themselves seem to refer to some sort of academic status. Reinoud also planned a grand theological conference somewhere in the Veluwe region in 1315, for which among others the magisters of the university of Paris seem to have been invited.
69 Moors 2000, pp.44-45; Schneider 1990, p.14. Judging from the form of the present-day town of Hattem, it seems to have been laid out partly according to a predetermined plan, somewhere around 1300, starting from an older core.
70 Schneider 1990, p.15. The hospital at Mons Dei (Hathem) also functioned as a place of residence for the count and his relations. (Moors 2000, p.45)
71 These psalms were part of a ‘Zion tradition’, in which Jerusalem is identified with the utopian community under the protection of God. (Ollenburger 1987, pp.15, 17, 23) For contemporary commentaries, see Schneider 1990, n.32.
72 Augustine’s writings may have had a particularly strong influence on the politics of Count Reinoud. (Schneider 1990, p.14)
73 Isaiah 2:1-5.
74 According to Moors (2000, pp.43, 56-64), Reinoud’s eschatological expectations were inspired by Franciscan theologians whom he met during a stay in Paris in 1289.
75 Schneider 1990, pp.12, 15, 19-20.
76 Schneider 1990, p.18; Moors 2000, p.47. Two hospitals were planned to be built in France and in the Holy Land, but they were never realised. (Schneider 1990, pp.12, 15)

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Reinoud also renamed, or rather re-founded, a number of towns in Gelre, such as Hattem (formerly Mons Dei), Wageningen, and Kessel and/or Roermond into Insulae Dei. It seems that he wanted to make these towns into virtuous places: a sort of islands of Christian morals, where caritas was the norm, within a sinful world.\(^77\)

Most probably, Reinoud also used various of the hospitals and towns, and also monasteries, residences and the societas that he founded, to strengthen his foothold in the region of the Veluwe, which was a relatively new addition to the county. Another more mundane motive probably was to achieve a greater unity of the county as a whole, as it was still a collection of separate domains and lordships that had been acquired fairly recently.\(^78\)

In the present context, however, it is of primary importance that the towns that Reinoud founded or re-founded also played an important role in a sort of ‘salvation program’, which he must have had in mind for his familia or his territory.\(^79\) It may be concluded that Reinoud most probably thought of towns, preferably provided with hospitals of his societas, as the best place to live in for his subjects, so that their souls would be cared for in the best possible way. It seems that Reinoud had an ideal of shaping his territory into a virtuous state, well-organised and administered by himself and his societas, so that his familia would lead a harmonious and virtuous life in preparation for the Last Judgement, and that from this basis the heathens would be defeated and the Holy Land would be re-conquered.

Reinoud’s plans were, however, over-ambitious: he never went on crusade, and the societas as well as the two unions of hospitals did not outlive his rule, which lasted to 1318.\(^80\) Consequently, Reinoud’s plans are mostly attributed to his supposed madness.\(^81\) His town foundations were a little more successful: Hattem was of regional importance until the 17th century. Staverden on the other hand, was a complete failure, since it was located on a site that was ill-suited and its settlers did not receive freedom from feudal obligations.\(^82\) Arnhem, however, flourished during Reinoud’s reign and nowadays it is the capital of the province of Gelderland in The Netherlands. It is not clear, however, to what degree Arnhem was actually affected by the policies discussed here, as there are no unambiguous indications that Arnhem was also one of Reinoud’s (re-)foundations.

Nevertheless, the case of Count Reinoud’s foundation policy clearly shows that the foundation of towns could sometimes be largely motivated by considerations of an ideological nature in the period under discussion.

\(8.3.2\) The Hussite town of Tábor

In the year 1415 Johannes Huss, who had been rector at Prague University, was sentenced to death by the council of Constance and was burnt to the stake for preaching anti-papal ideas. Through a peculiar combination of circumstances this was indirectly the starting point of a great popular social revolt that broke out in 1418 in the towns of southern Bohemia, where people from the lower classes rose against the ecclesiastical and secular authorities.

Part of the revolting people formed religiously inspired communities that founded, or rather re-founded, towns where they settled. They called their towns ‘cities of the sun’, and they believed that these settlements would survive the End of Time, which they believed to be nearby. The Hussites, as the religiously inspired rebels are called, assembled there and in camps on hilltops with biblical names such as Sion, Horeb and Tabor. The cities combined in leagues and the military leaders of the Hussites became the actual leaders of the country of Bohemia after the dethroning of King Sigismund in 1421, when an interim government was appointed. The Hussite forces managed to defeat the armies of crusaders that were supported by the Roman church since it condemned the Hussite movement as heretical. Finally, in 1434 the Hussite-state died largely because of internal disagreements.\(^83\)

The most significant of the Hussite towns was Tábor. (fig.8.5) In 1420 a band of Hussites had conquered

\(^{77}\) Schneider 1990, p.20. At 4 December 1312, Reinoud issued a number of charters to existing towns and villages in his county, among which two of the new Insulae Dei towns. In general, the towns that were not named Insula Dei were termed oppidum, while the Insulae Dei are called civitas. (Moors 2000, pp.50-51) In the charters it is stated that the towns should turn to the ‘Maior civitas de Insula Dei’ for juridical consult, which would have made this place become a sort of mother town. Unfortunately, it is not possible to solidly identify which town this actually was. Schneider believes that it is Arnhem, whereas Moors and others claim that it must have been Roermond. (Schneider 1990, pp.21, 23; Moors 2000, pp.48-51) The new issue of charters had no long-lasting influence.

\(^{78}\) Schneider 1990, pp.15, 22-25.

\(^{79}\) Schneider 1990, p.18.

\(^{80}\) Schneider 1990, pp.24, 25.

\(^{81}\) Moors 2000, pp.39-42.

\(^{82}\) Fockema Andreae 1948, p.123.

the stronghold of Hradiště, which was sited on a well-defendable hilltop with steep sides surrounded by rivers. In February 1420, the Hussites went up the mountain from the nearby town of Ústí, which they left burned down, in the conviction that the End of Time was nearby. They called the camp they made there Hradiště hory Tábor, which means Fortress of the Mountain of Tábor, after the biblical mountain where the Israelites camped before they conquered the land of Canaan.84 In the following years, especially in 1422-24, the camp was turned into a town with an economical, social, administrative and architectural structure.85

In essence, the Taborite community was really a sort of communist society, since the credo was that ‘Private property is mortal sin. All people shall be brethren and there shall be no rulers and no dominion […]’.86 According to Gutkind, Tábor was the first town ever that was founded on such strongly communitarian principles.87 Since its foundation Tábor attracted many people, especially manual labourers, from nearby and far away.

Considering the urban form of the town, it is striking that the plan is highly irregular. (fig.8.5) Regarding the circumference, it is obvious that its irregular shape was chosen rationally, following the contours of the topography. The complex pattern of streets and lots, however, cannot be interpreted in this way. Although the area within the walls is far from level, the alignments of the streets do not correspond to the gradients in a logical way. In the scholarly literature different explanations are given for the irregularity of the plan. Some authors write that the irregular labyrinthine structure of streets was created explicitly for reasons of defence.88 This does not seem very probable, however, because then it would not be logical that the two main streets lead directly from the gates to the central square. Therefore, it seems more likely that the irregularity was caused by the remnants of pre-existing structures that influenced the form in which the first camp was set up and which subsequently fossilised. This hypothesis could probably only be proven by close investigation of the old buildings and archaeological excavation.89

It almost seems as though the anti-authoritarianism of the movement is reflected in the plan of the town. And in a certain sense this may indeed be the case. The rejection of private property in the initial phase of Tábor’s history may have caused the house lots to have ‘come about’ in a gradual process of private occupa-

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84 Bujnoch 1988, n.25; Judges 4.
89 I have not been able to find publications on these subjects. It appears, however, that many underground tunnels have been found, leading to the fortifications. They seem to date back to the Hussite period. It is obvious that these tunnels played a role in the defence of the town. (Gutkind 1972, p.318)
tion, instead of having been created wilfully and coordinated. So, it seems that the typical spatial form of Tábor has come about by the combination of the form of the initial camp amongst the remnants of earlier structures, and the gradual creation of an allotment into distinct private house lots.

The church is sited on the highest point of the town next to the central open space. It does not date back to the period of origin of the town, however: initially it was explicitly omitted as a reference to the Heavenly Jerusalem of the Revelations of St. John, in which there is no church because God is all over the place. Instead of a church, the central open space must have served as the stage for religious service.

After the defeat of the Taborites, the town seems to have been turned into a ‘normal’ town rather fluently. Apparently, the reason for the success of the town had not just been the Taborite ideology, but also the economic and strategic opportunities of the site.

8.3.3 Comparison with other foundations of utopian cities

The case of the foundation of Tábor is very different from the foundations of Count Reinoud of Gelre, but there are also some significant similarities. Most striking is the reference in the town names to biblical mountains, which seems to have had eschatological connotations in both cases. Another similarity is that in both cases the care for the poor is an important aspect. One can also find these themes in other occurrences in the course of the history of Christianity.

After the capture of Jerusalem in 1099, during the first crusade, the party of ‘the poor’ within the host of crusaders, probably consisting of peasants and lower clergy, opposed the establishment of any kind of government, because they expected the Kingdom of Heaven to descend on Mount Zion within the near future, as prophesied in Psalm 46-48. In this Kingdom absolute justice would make the poor to be among the first to enter the Heavenly Jerusalem. The other interested parties, however, the feudal rulers and the clergy, did not proclaim such revolutionary ideologies and demanded the appointment of a lay ruler and a patriarch respectively. Eventually, a worldly kingdom of Jerusalem was instituted.

The Hussite utopian towns can also be compared to later literary utopian cities, such as Thomas Morus’ Utopia and Tommaso Campanella’s Città del Sole (which means City of the Sun, just like the Hussite towns were called) for their visionary social ideology. But the Hussite towns are even more similar to other settlements founded with an eschatological ideology. In Italy in the 13th and 14th centuries, dissident Christian movements, such as the ‘Dolciani’ or ‘Pauperes Lombardi’, appear to have founded settlements with similar ideologies. There are also parallels with the city of Florence during the republic of the humanist priest Girolamo Savonarola (1494-98), and the ‘Kingdom of Sion’ of the revolting movement of the Anabaptists at Münster in Westphalia in 1534-35, where societal organisation was aimed at achieving an ascetic godly city on earth in preparation for the apocalypse.

8.4 ‘Ideal city’: a problematic term

The town foundations inspired by religious ideologies that are treated above, might be regarded as ideal cities. There are, however, some problems with this term that should prevent us from casually doing so.

The terms ‘ideal city’ and ‘utopian city’ have become expressions that are often used for designs of imaginary cities and, less often, for cities that were actually built in the past. In the literature on ideal cities it is, however, more or less generally considered that these terms cannot be applied to cities and towns of the ‘middle ages’, since the idea of the ideal city is almost generally regarded as an invention of the ‘renaissance’. It is supposed that in the ‘renaissance’ of 15th-century Italy, under the influence of the humanist idea that

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90 It should be noted, however, that rejection of private property of land does not necessarily lead to spatial disorder. Cf. the 19th-century Mormon foundation of Salt Lake City. (see Kostof 1991, p.101)
91 See Franchetti-Pardo 1982, p.459.
92 Revelations 21:22.
93 Franchetti-Pardo 1982, p.459. It seems that at first the open space was not meant as a market place.
94 Moors 2000, p.58.
95 Prawer 1972, p.473.
96 Gutkind 1972, p.317. The later literary utopian cities will be briefly considered in par.8.4.
man could shape the world himself, creating new cities and new civic communities became an option that did not yet exist in the ‘middle ages’, since the world was seen as essentially created by God and not alterable by man in that period.  

Furthermore, the absence of theoretical writings on architecture and town planning from before the ‘renaissance’ is more or less commonly explained as a complete absence of urbanistic reflection, and therefore it is thought that towns and cities that were created in that period could never be ‘ideal’.  

The answer is that these ideas are based on a preconceived and partly wrong view of the periods of ‘the middle ages’ and ‘the renaissance’, rather than on the actual study of the relevant material. In chapter 11 this problem will be discussed in detail.

In the 15th century a new phenomenon appeared in the world of architecture and town planning: the architectural treatise. Inspired by the Roman architectural treatise De architecture libri X, written by Vitruvius around 30 B.C., scholars and architects began to write educational works for architects and amateurs on architecture and town building. In these works advice is given on the siting, layout and organisation of towns and cities. A large part of the contents of these works is inspired by the writings of authors from antiquity, such as Vitruvius, Vegetius and Aristotle. The most important early examples are the treatises by Leon Battista Alberti (1452), Filarete (1460–64; fig. 8.6) and Francesco di Giorgio Martini (1479 / 1492).

In the 16th and 17th centuries another type of literature concerning visions on cities was revived. It regards fictional works that have come to be termed ‘utopian literature’. They describe imaginary perfect societies
in imaginary places, inspired by classical literature, such as Plato’s Laws and Timaeus and Aristoteles’ Política. In the texts authors implicitly criticised the world they lived in, and in the described perfect societies they incorporated ideas of what would make a better society according to them. In these utopias the perfect society is given the form of a city.\textsuperscript{105} The most important examples are Thomas Morus’ Utopia (1516), Kaspar Stibilin’s Commentariolus de Eudaemonensium Republica (1553), Tommaso Campanella’s Civitas Solis (1602-3 / 1623) and Johann Valentin Andreae’s Christianopolis of 1619.\textsuperscript{106} The form of the cities is commonly described only briefly, and in the one text it is clearer than in the other. Remarkable correspondences are that they all have a geometric outline of round or square form\textsuperscript{107}, defined by a town wall. And in all apart from Morus’ Utopia there is a special focus on the centre, where an open space with a temple is located, with streets regularly radiating out from it.\textsuperscript{108}

The literary utopias were meant as ideal cities or as commentaries on the idea of the ideal terrestrial society. But the urban designs in the architectural treatises of the 15\textsuperscript{th} to 17\textsuperscript{th} centuries are also often called ‘ideal cities’ in the scholarly literature. This term, however, is problematic, since it is mostly not defined what is ‘ideal’ about the concerned towns and cities, and it appears that there are rather different conceptions of what an ideal city would be.\textsuperscript{109} The term is often used for the designs of geometrically regular urban plans in the architectural treatises, as if the regular plan is what makes an idea of a town or city ‘ideal’.\textsuperscript{110} Towns from the 15\textsuperscript{th} century and after, which were actually built or restructured more or less following the models from the treatises, are also often termed ‘ideal cities’. These towns, such as Sabbioneta, Palmanova (fig.10.12) and Pienza in Italy and Freudenstadt in Germany, have received relatively much - almost excessive - attention in comparison to the planned towns of the centuries before. It has never been clearly described, however, why such towns of the 15\textsuperscript{th} to 17\textsuperscript{th} centuries would be ‘ideal’ and why planned towns from before the ‘renaissance’ are not considered in that perspective.\textsuperscript{111}

Hanno Walter Kruft defines the ‘ideal city’ as ‘[…] the paradoxical effort to realise a utopia, of which the form of the town is the visible reflection.’\textsuperscript{112} The literal meaning of the Greek term ou-topos is non-place, but in a modern dictionary ‘utopia’ is described as ‘an imagined perfect place or state of things’.\textsuperscript{113} Therefore, it is a paradox to conceive of a utopia that is actually realised. The word ‘ideal’ has many different meanings, but here, too, the dictionary makes clear that the word is primarily related to phenomena that are ‘perfect’ and ‘existing only in the idea’. Hence, it is rather paradoxical to speak of actually realised towns as ‘ideal cities’. As described in the previous paragraphs, the form and organisation of actual cities and towns can certainly be inspired by ideals or even utopian ideals. Stronger still, as Colin and Rose Bell write, ‘[…] any artificial shaping of the environment according to a plan is inevitably idealistic to some degree, and inevitably suggests the prospect of planning for total perfection. […] There is no hypothetical situation in which we can regard the builder as free from choice, and every choice which is made for reasons in which the physical, spiritual, aesthetic, political or economic welfare of the proposed inhabitants plays some part, as opposed to that of the planner, is in that restricted sense an utopian choice. In either case, planners who might be supposed to be concerned merely with the provision of cheap and tolerable accommodation for factory workers very often turn out to consider that what they propose will also eliminate crime, improve health, and inspire an artistic renaissance, if it does not accelerate the Second Coming.’ In town planning ‘[…] the most extreme social, and the most pragmatic civil, share in this context a faith in the importance of environment, and each can give the other ammunition.’\textsuperscript{114} This is a fundamental notion which makes the use of the term ‘ideal city’ quite senseless for cities that are actually built. A new urban settlement can be created with an ideal city as a model, but that does not make the result an ideal city.

\textsuperscript{105} For a definition of the utopian literature, and an extensive bibliography, see Rahmsdorf 1999, pp.9-14.
\textsuperscript{106} Rahmsdorf 1999; Borst 1996. Filarete’s description of Sforzinda in his Trattato di architectura of 1460-64 can also be interpreted as a utopian description, but since the emphasis is strongly on the architecture and only weakly on its society, it is rather different from the real societal utopias of Morus and his followers. (Rahmsdorf 1999, PP.34-39, 54-59)
\textsuperscript{107} The outline of Morus’ Utopia, however, is described as ‘more or less square’ (figura fere quadrata). (Rahmsdorf 1999, p.98)
\textsuperscript{108} See Rahmsdorf 1999, pp.93-209.
\textsuperscript{110} Some authors motivate the use of the word ‘ideal’ by stressing that the regular geometric form has a symbolic meaning, as symbolising the link between microcosm and macrocosm. (Van den Heuvel 1991, p.15; Rahmsdorf 1999, pp.16, 60-63) The idea of the reference to the form of the cosmos is largely based on a passage and a figure in Francesco di Giorgio Martini’s Trattato, in which the city is compared to the human body in its functional parts and where the human body is explicitly called a microcosm that mirrors the macrocosm. This link of macrocosm / man / town, however, does not specifically refer to geometrically regular polygonal or round plans, as is often tacitly presumed. (Rahmsdorf 1999, pp.41, 65) It seems that plans with regular polygonal structures are sometimes over-interpreted as cosmic symbols, because these structures were also, or maybe mainly, valued as the optimal form for defence. (see for instance: Lang 1977; Marconi 1973; Johnston 1983, pp.36-64)
\textsuperscript{111} Van den Heuvel 1991, pp.6-20. The interpretation of actually realised towns as ideal cities, can be found, for instance, in Kruft 1989. This book also contains a bibliography of literature on ideal cities.
\textsuperscript{112} Kruft 1989, p.10: ‘Wir verstehen die Idealstadt als den paradoxen Realisierungsversuch einer Utopie, die Stadtgestalt als ihren sichtbaren Abdruck.’
\textsuperscript{113} Rahmsdorf 1999, p.80; The Oxford Compact English Dictionary 1996.
\textsuperscript{114} Bell 1969, p.48.
The interpretation of real towns and cities as ideal cities has led to questionable results. In various cases it has even obscured the true motives of choices for specific forms, such as, for instance, regular polygonal fortifications.\textsuperscript{115} This does not mean, however, that it is senseless to interpret towns and cities that were actually built as material expressions of ideals. In fact, this can be very useful, for instance in order to learn about ideas on urban social organisation, about aesthetic preferences on urban form or about the relation between mundane motives and higher ideals.

The term ‘ideal city’ must be used with care, however. It is an appropriate term for conceptions of cities that are truly meant to form perfect societies. But it is confusing to put the label on any plan design of regular geometric form, or any realisation that resembles the designs in the architectural treatises of the 15th century and beyond, as has been done all too often.\textsuperscript{116}

8.5 Aspects of societal ideology in the newly planned towns of the 12th to 14th centuries

It is clear that some of the ill-fated (re-)foundations of the count of Gelre, treated in paragraph 8.3.1, were inspired by ideas regarding the organisation of society, related to contemporary crusader-ideology and eschatological expectations. Societal ideologies related to the End of Time are much more clearly recognisable in the case of the Hussite town foundations, particularly Tábor.\textsuperscript{117} It is evident that writings such as St. Augustine’s De civitate Dei and St. Thomas’ De regimine principum handed influential ideological arguments for the foundation of new towns.\textsuperscript{118} Some contemporary sources concerning new town foundations of a more usual sort than those of Reinoud of Gelre or the Hussites, also mentioned motives of ideological nature. Regarding the Florentine new town of Firenzuola, for instance, the foundation document of 1332 mentioned that it was created ‘[…] for the honor, peace and good state of the Commune and populace of Florence and the Guelph Party and the holy mother Church’.\textsuperscript{119} And in the foundation document of the town of Polička in Bohemia, of 1265, it was stated that the town was founded ‘[…] as Christian devotion and the future welfare of mankind demand.’\textsuperscript{120} It is highly probable, however, that rather pragmatic military and economic motives were of far greater importance in both these foundations. But in official documents such pragmatic motives are rarely explicitly mentioned. In fact motives are rarely mentioned at all in the contemporary sources, so mostly it is difficult to discern if there was an ideological drive behind the foundation of a new town. It seems, however, that in most cases more mundane motivations, such as the exercise of power or the exploitation of the land and the people living on it, formed the main motives for new towns to be founded.

It should be kept in mind, however, that all artificial shaping of the environment according to a plan is inevitably idealist up to a certain degree.\textsuperscript{121} And it is logical that this idealist content must be relatively important when the shaping of the environment regards the foundation of a new town, because it does not only consider the shaping of the landscape, but also the institution of a new closed society, for which laws and regulations are newly laid down, determining the rules for co-existence.

In the following paragraphs we will discuss possible ideological motivations that determined the urban form of newly founded towns from the 13th and 14th centuries. Once again, the Florentine terre nuove will play an important role in this discussion, which is due to the fact that they are relatively well-documented and well-studied.

\textsuperscript{115} Van den Heuvel 1991, pp.14-15, 20. Various fortified towns and cities of the 15th to 17th centuries have been misinterpreted as ideal cities due to their regular plans and polygonal outlines, which also form part of the literary utopias of the period. It is implicitly denied that the aspect of optimal defence was generally of main importance in the choice of the outline forms.

\textsuperscript{116} Another example of a too limited view due to interpretation as ideal city regards the Tuscan town of Pienza, which was partly rebuilt in the 15th century. (see among others Kruft 1989). In my opinion comparison to other towns of the period and region and their relation to the landscape offers more insight in the creation of its specific urban form than just viewing it as an ideal city, even though aspects of its design were certainly influenced by particular ideals.

\textsuperscript{117} In 1965, Bauer proposed to use the word Planstädte (plan-cities), instead of ideal cities, for the designs in the treatises and their realisations. (Bauer 1965, p.99; Rahmdorf 1999, pp.67-69) In my opinion this is not a specifically appropriate term, since all cities and towns have plans and most of them are largely planned. Therefore, it is better to use more accurate descriptions.

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\textsuperscript{120} For more comparable motivations given in contemporary written sources, see par.9.1.5.

\textsuperscript{121} See par.8.3.
### 8.5.1 Equality of the house lots in newly planned towns

In most of the newly founded towns for which the originally intended sizes of the lots are known, the lots were, unlike the terre nuove fiorentine, conceived equal in size.\textsuperscript{127} Is it possible that this was based on an essential ideology of equality among the citizens of a town? Or were the lots conceived equal in size just because this is the simplest way to lay out a plan, to organise the settling of the inhabitants and to determine the rents? According to Spiro Kostof there actually was an ideology of equality: ‘In accordance with the free society they promoted, medieval new towns had honorable intentions about the equality of their parcels.’ Unfortunately, he does not elaborate upon this fundamental statement.\textsuperscript{133}

It should be considered here, that equality of lots is not necessarily imbedded in the grid plan, as is clearly shown by the terre nuove, which have a systematic variation in lot sizes.\textsuperscript{126} Conversely, however, the choice for lots of equal size does favour the grid plan; at least, if the planners do not want to make their job unnecessarily difficult.\textsuperscript{125} Therefore, new towns that were founded by the Huguenots in the 17th century in Germany and Poland and the Mormon-cities in 19\textsuperscript{th}-century USA, in which the lots were all equal in size in order to reflect the equality of their inhabitants before God, were laid out on highly regular orthogonal grids.\textsuperscript{126}

Ideas concerning equality among citizens can be found in theoretical writings from the 13\textsuperscript{th} century and later, in which the idea in juridical sense\textsuperscript{127} is specifically connected to civilitas and urbanitas, presented as flowing forth from the Christian ideals of love, charity, equality, and unity before God. The town is seen as the metaphor for brotherly and god-fearing life.\textsuperscript{128}

The planned equality of the initial house lots in new towns may also have had other motives. It is most likely that the principal equality of lots is, at the very least, partly motivated by pragmatics of planning and of rent calculation.\textsuperscript{129} If the equality of the lots was really a principal ideal in the layout of new towns, it would at least seem likely that regulations would have been instituted to keep the plots to their original size. I know of no such regulations, however. In fact, there are various towns where the principally equal standard lots appear to have been distributed in multiples or parts already in the initial phase.\textsuperscript{126}

Apart from the techniques of planning and rent calculation, there is another rather pragmatic possible motive for the equality of the planned plots. It was (and still is) of essential significance for the attraction of people to new settlements, that possibilities were offered that looked promising for the improvement of individual and collective existence. Starting from an essential equality must certainly have looked promising to ambitious people. A clear example is the donation of civic rights to the town of Jaca by King Sancho Ramírez of Aragon in 1063. The king promoted his castle settlement to the status of town. In the donation of the privileges it was formulated why the king made the laws equal for every settler from the day of the foundation: ‘because I want that it will be well-settled I give and confirm you and all who will move to my town Jaca, all the good laws, that you have requested, so that my town will be strongly settled’, and therefore all citizens received the same rights and had to suffer the same punishments in case the rules would be broken, ‘whether he is knight, burgher or farmer’.\textsuperscript{130} It is not clear what the original lots in the town looked like, but the quotation suggests that the king thought his new town would be most successful in attracting settlers when he gave them good privileges that were the same for all of them.

In my opinion, it is likely that the same idea played a role in the initial distribution, or promise, of lots of equal size to settlers, whatever their social background was. The terre nuove are essentially different from

\textsuperscript{122} Keyser 1958, pp.30-31. See also par.9.11 and appendix C.

\textsuperscript{123} Kostof 1991, p.100.

\textsuperscript{124} Keyser 1958, pp.30-31. See also par.8.5.2.1.

\textsuperscript{125} Kostof 1991, p.101. Above, this ideology of equality before God is already encountered with the Taborites in the early 15\textsuperscript{th} century. But in their city of Tábor there are no traces of an equality of lots. This is because, on the one hand, Tábor was not purposely laid out by the Taborites, and on the other hand because initially their ideology was that there would be no private possession. See par.8.3.2.

\textsuperscript{126} This equality of citizens before the law became the normal situation since about the 13\textsuperscript{th} century. (Frenz 2000, pp.72-77, 134) In earlier times social groups, such as merchants, craftsmen, clergymen, noblemen and serfs, lived under their own specific laws. (Frenz 2000, pp.17-22, 136-137) Later on, citizenship was often still refused to various ethnic groups, women, clergymen, noblemen and for the unfree as far as they still existed before the law. (Mumford 1961, p.317; see also par.9.9)

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\textsuperscript{129} For instance in the anonymous North Italian Oculus Pastoris of c.1222, William of Auvergne’s De sacramento in generali, from the first half of the 13\textsuperscript{th} century, Francesco Eximenis’ Regimen de Principis of 1348 and Johann von Soest’s Wy men wol ein stark stadt regen sil (How to govern a city well) of 1495. (Frenz 2000, pp.214-233; Trueta 1946, ch.5 (Eximenis))

\textsuperscript{130} See par.9.11.

\textsuperscript{131} This was probably the case in Bern, where the original lots were 100 ft. wide and 60 ft. deep according to a later charter, seemingly intended to be cut up in pieces right from the outset. (Strahm 1945, p.41; Fröhlich 1975, p.306; Divone 1993, p.94; see par.8.3.2) Other cases are Dobcyce in Little Poland and New Salisbury in England. (see par.9.11)

\textsuperscript{132} Pitz 1991, p.381. Pitz only gives a German translation of this part of the document; ‘wel ich will, daß sie stark besiedelt werde, gestehe ich euch zu und bestätige ich euch und allen, die sich in meiner Stadt Jaca niederlassen, alle jenen guten Gesetze, die ihr von mir erbeten habt, damit meine Stadt stark besiedelt werde’; ‘er sei Ritter oder Marktbürger (burgensis) oder Bauer’.
many other new towns since they were more or less forcibly settled with existing communities; if they had been planned to attract new settlers from anywhere else, nobody would have wanted to occupy the smaller lots, since it does not appear that they were cheaper.

The situation of the initial equal lots in the new towns of the 12th to 14th centuries may be compared to the situation in the USA in the late 18th century, when under the National Land Ordinance the whole country, as far as it was not yet settled, was theoretically divided into a grid of equal lots that could be cheaply obtained by settlers, in order to colonise the still uncultivated parts of the country as well as to work as a ‘social equaliser’. Just as in the older newly planted towns in Europe, however, the original equality of the parcels was disturbed quickly when the land market became more dynamic once the settlers had flocked in.

So, there are indications suggesting that ideals concerning equality of the citizens may have played a role in the planning of new towns in the high-period of town foundation. It is well possible that the principle of equality of the lots in many new town projects may have been inspired by this. It should be considered, however, that it is likely that practical considerations regarding the planning and settling of new towns, as well as the calculation of rents and taxes most probably also played important roles as motives for the basic division of the land into equal lots. Unfortunately, it is not possible to reconstruct the relative importance of these considerations.

### 8.5.2 The Florentine terre nuove

Hermann Bauer claims that the terre nuove fiorentine can be regarded as small realisations of the ideal city. In his opinion they were the ideal cities of the faction of the guelfi, which was in power in Florence at the time the towns were founded. Bauer claims that the guelfi aimed to realise in the terre nuove the things that they could not realise in Florence due to political resistance and the toughness of the existing situation. Bauer is rather vague about what exactly would be ideal in the case of the terre nuove. He describes that Florence was sometimes regarded as a depiction of the Heavenly Jerusalem, and he claims that the terre nuove were planned to have been depictions of Florence. His main argument is that they were explicitly sited on plains, such as Florence itself, instead of on higher locations, where it would have been easier to defend them. With this argument, however, he ignores other important motives for the choice of the specific locations of the terre nuove. Bauer also argues that they were ideal towns because the aspect of beauty, pulchritudo, played a role in the communal regulations in the terre, which were formulated long after their realisation in the statuti of the late 14th and 15th centuries. This is not a strong argument, however, since pulchritudo was an aspect of importance in the regulations of many of the cities and towns of northern and central Italy since the 12th and 13th centuries. Pulchritudo certainly had to do with aesthetic ideology, as will be discussed in paragraph 8.6.1, but it makes no sense to interpret the terre nuove in particular as ideal cities for that reason.

There is no doubt, however, that in their spatial, social and administrative structure, the terre nuove contain aspects that reflect ideas about the ideal organisation of the city, that lived among the ruling class of Florence at the time. This ruling class mainly consisted of the elite of merchants of the most powerful guilds. David Friedman clearly described these aspects and the ideas they were based on. He refers to the unity of the towns, with their internal coherence and the wall that surrounds them, to the cruciform layout of the main streets, and to the centrality of the piazza, with its important functions and the buildings of the

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132 Kostof 1991, pp.100, 116, 121; Reps 1965. See pars.10.3.1, 10.4.
133 It is possible that the aesthetic ideal of regular spatial order, as will be discussed in par.8.6, also played a role in this, although the plans of the terre nuove demonstrate that this ideal did not necessarily lead to equal lots.
134 Bauer 1965, pp.22-23.
135 As discussed in pars.3.5 and 3.9.1, it is obvious that the terre nuove were built on strategic locations on main routes into the Florentine territory in fertile valleys in areas where the rebels had their bases of power.
136 Bauer 1965, pp.18-23.
138 Guidoni also writes that the terre nuove and other non-specified newly planned towns in Italy can be regarded as ideal cities. In his opinion, every town foundation by the city states of northern and central Italy is always (implicitly or explicitly) an ideal reproduction of the mother city, where new aesthetics and techniques could be tried out much easier than in the mother city itself. But only some of these new foundations can be really regarded as ‘ideal’, according to Guidoni. (Guidoni 1992 (II), p.91)
139 Already in 1953 Braunfels argued against the interpretation of the new towns of the 13th and 14th centuries in Tuscany as ideal towns. In his opinion this interpretation was based mainly on the regular plans and the fact that they lay in Tuscany, for which reason they were regarded as a sort of ‘proto-renaissance ideal cities’ instead of as part of the contemporary surge of new town creations. (Braunfels 1953, pp.10-11)
administrative and ecclesiastical institutions that are sited on it. These aspects can also be found in idealised representations of the city of Florence of the 14th and early 15th centuries. Friedman also describes how the government strove to make streets in Florence straight, wide and without obstacles, in order to make them better surveyable by its officers, in order to prevent crime and rebellion. It hardly succeeded in doing so in the city, but in the terre nuove all streets were planned following this ideal form. Another aspect that Friedman interprets as the reflection of an ideal of societal organisation, regards the ban on the nobility (magnati) from the new towns. In the city itself, the administration was not able to ban all magnati, but in the terre and their immediate surroundings they were simply not allowed to live or to have possessions from the very start of the projects.

8.5.2.1 The different lot sizes in the terre nuove

Friedman also considers the hierarchical order of the parallel rows of houses that get smaller towards the outside of the towns (most clearly visible in fig. 3.27) to be an aspect that is based on an ideal view of the organisation of the city of Florence itself. In principle, this would be diametrically opposed to the ideal of equality that may have been represented by the initially equal house lots in many other new towns, which is discussed in paragraph 8.5.1. Friedman describes that hierarchical order was an essential aspect of the idealised representations of the city of Florence that were made in the 14th and early 15th centuries, with the centre as the point of highest importance and decreasing levels of importance, in social, economic and administrative sense, towards the outside. The systematically ordered variety of house lots that is so typical of the terre nuove would have been planned to accommodate the variety of rich and poor farmers. The spatial organisation explicitly did not provide space for a completely different social class such as the nobility or the very rich, according to Friedman.

The variety in the size of the house lots, which diminish in length as they are sited further away from the central main street, is a very peculiar phenomenon. The Florentine terre nuove of Castelfranco, San Giovanni, Scarperia, Terranuova and Giglio Fiorentino are the only towns of the period that had such a systematic variation in the size of the house lots. Many, or possibly most, other new towns were initially planned to have lots of equal size. For as far as known, only few had house lots of different sizes that were planned in advance. But without exception, the variation was more limited and less regularly ordered than in the terre nuove. It is possible that in still other cases the allotment into house lots was deliberately left open to the demand of the settlers.

Now, why were different lot sizes planned in the terre nuove? It seems likely that the highly ordered variation of the house lots - distributed in three or more different classes with relatively small differences between them - must have reflected some sort of ideology with respect to the composition of the urban society. This ideology appears to have contained at least three aspects: the aspect of different classes (at least three) of households that had a different need for space, the aspect of orderly grouping, with the lots of the same classes side by side in rows, and the aspect of hierarchy, which was focused on the centre.

From many sources it appears that in the period of about the 12th to 16th centuries the ideal way to order towns and cities in social and economic sense, was to distribute the professions, and with them the house-
only up to a certain extent, and mostly it followed basic economic mechanisms rather than regulations.

In origin, a similar idea might have been behind the distribution of the different house lots in the terre nuove. However, there it clearly did not meet the actual variation in economic activities, since nearly all households originally lived of agriculture.\(^{150}\) It is also known that the distribution of wealth did not reflect the distribution of the different sizes of house lots: there were many people who owned very little, and there were only a few with relatively great wealth.\(^{151}\) So, if the variation in lot sizes was planned to accommodate a variation in profession or in wealth, it did not correspond with the way in which the towns were actually populated.

Regarding the idea of society as composed of different classes, there was also another ancient tradition of classification. Already in the fourth century B.C. Plato described his vision of the ideal society as consisting of different classes that harmoniously constitute one complete whole. In his opinion the best way to organise society was the city-state or polis, which was composed of three different social classes: the guardians or philosopher-rulers, the auxiliaries or warriors, and the commoners or producers (farmers, artisans and merchants).\(^{152}\) Since then, this societal model, which is usually called ‘the theory of the estates’, has played an important role in western thought on society at least until the 18th century.\(^{153}\)

The precise partition between the classes, however, varied by period and place. In the 12th to 15th centuries, for instance, adjustments were made to this system of ‘estates’, as the existing model that had been moulded originally from agriculture.\(^{154}\) It is also known that the distribution of wealth did not reflect the distribution of the wealthiest people in town, a furrier, an inn-keeper, some cobblers, smiths, prostitutes and clergymen. (Beccastrini, Billi & Galli 1989, p.37)

Likewise, in San Giovanni in 1427 there were about 1500 inhabitants, most of whom lived of agriculture; apart from that there were two merchants in spices (who were from these professionals, it is likely that there were also people who were (partly) active in the working of iron and in keeping inns. (Romby & Diana 1985, p.22, n.31)

Professional zoning was often reflected in the names of streets. For instance in the town of New Salisbury, there used to be a Butcher Row, Pot Row, Oatmeal Corner, Wheelrow (wheelwrights), Ironmonger Row, Poultry Street, and Cordwainer Row. (Ancient and Historical Monuments of the City of Salisbury 1980 (vol.I), pp.XL-XLII)

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were often simply discerned in ‘rich’ or ‘powerful’, ‘middling’, and ‘poor’, or alternatively ‘great’, ‘middling’, and ‘lesser’.156

In early 14th-century Florence there was a very popular preacher by the name of Fra Giordano da Rivalto, also known as Giordano da Pisa. He was a Dominican priest, and his public consisted mainly of the higher class of citizens, the wealthy members of the major guilds, known as the popolo grasso. His sermons often dealt specifically with city life. Just like many illustrious predecessors such as Aristotle, Saint Augustine, Thomas Aquinas and many others, he explicitly thought of the city as the ideal form of society.157 In one specific sermon, Giordano compared the different professions that are practiced in the city with the different parts of the human body. About the differences he said: ‘the one part of the body is more noble and more graceful than the other, but in this variety lies the beauty, which is greater than when all parts would be equal’.158 But he added that the different parts can only be beautiful when they are in the right place: ‘The way the nose is beautiful within the face, but ugly when without the face [...] thus is the foot beautiful in its own place; when it is on the chest or on the head, it will be ugly’.159 Giordano used this anthropomorphic metaphor in order to stress the fact that there can only be harmony through ordered diversity, in the Divine creation as well as in human creations.160 This was a well-known principle in the theory of beauty in the 13th century; and the metaphor of the human body was a more or less common way to illustrate it.161

With this, Fra Giordano was not speaking about different social classes such as priesthood, warriors and labourers, but about different professions within the city or members of different guilds. Essentially, his message was: there are different classes within the same society, some people are wealthy and others are poor, some are rich and live an easy life, whereas others can only obey and have to work very hard, and this cannot be changed, because God has ordered it in this way. With the metaphor of the human body Giordano meant to say that the different professions in the city necessarily need to be different in prestige and need to be in the right place, in order to constitute the perfect God-created body, which is the ideal city. In this way Giordano defended the existing difference in professions, and consequently social classes.162

When it is taken into consideration that Fra Giordano preached especially for the higher class of merchants and bankers, the popolo grasso, his propaganda in favour of class-differentiation is hardly surprising. This higher class of citizens was represented by the major guilds, the arte maggiori, who held power in Florence in the period around 1300.163 This segment of the Florentine population formed the administration that was responsible for the founding of the terre nuove; and the relevant sermons were written around the same time that the towns were created. This demonstrates that the people who were responsible for the creation of the terre nuove are likely to have been familiar with ideas about the organisation of society such as Giordano’s.

In my opinion it might well have been the ideal of harmony and completeness in the composition of the different parts of the urban community, as of the parts of the human body, which was expressed in the ground plan designs of the new towns. The different classes of lot sizes represented the idea of supplementing groups in the urban society, that formed a complete wholeness as long as they were clearly and harmoniously ordered into a ‘natural’ hierarchy.

The variation in lot sizes was based on an ideal image of urban society. This ideal image was a schematic and stable composition into classes. The distribution of the house lots into classes of different sizes in the terre nuove did not correspond, and possibly was not even meant to correspond, to the actual situation in the rural society of the satellite towns164, but reflected the ideal of what the urban society, more particularly that of

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156 Reynolds 1982, p.20. It was taken as a matter of course that the ‘rich’, ‘powerful’ or ‘great’ took active part in the administration of the town. For instance, in the 13th century cardinal Brunetto Latini wrote that they had the moral obligation to help those who were less well off and that they were least selfish and least likely to be corrupted by money. (Reynolds 1982, pp.20-21)


158 ‘Così dico io: tutti saremo a modo d’un corpo: ciascuno sarà membro e l’una più nobile, e più gentile che l’altro assai, ed in questa diversità è la bellezza piu che se tutti fossero pari’. (Braunfels 1533, p.124, n.466; Frugoni 1983, p.193) Braunfels adds that the comparison between the cities and the human body was not unusual at the time: among others John of Salisbury used the metaphor.

159 ‘Così il naso è bello in sulla faccia, e fuori della faccia è susa cosa e non è bello [...] così il piede è bellissimo nel suo luogo; se fosse fuori di suo luogo, nel petto o nel capo, sarebbe sospetto.’ (Braunfels 1533, p.124, n.465)

160 For Giordano’s ideas on the importance of order in the town, in spatial as well as social sense, see also par.8.6.3.

161 Niehoff 1985, p.33. The human body and its different parts had become quite a common metaphor particularly for the differences between classes or groups in society. It can be found among others with Plato, Saint Paul (Letter to the Romans 12: 3-8), John of Salisbury (Sherwood 1980, pp.163-164) and Francesc Eiximenis (Eiximenis 1967, pp.11-13).

162 See also Da Rivalto 1867, pp.52-53.


164 From the old plans of Castelfranco and Scarperia (figs.3-6, 3-19), it can be deduced that the variety in lot sizes did not mirror an actual variety in classes (of profession, wealth or status) over the town as a whole, because the plans show clearly that only the larger lots were occupied in the quarters where less people were settled (the quarters were settled according to the places where the settlers came from, so that old social structures remained more or less intact, see par.3.8). In Scarperia, for instance,
real cities, should be like: a limited number of different classes, orderly housed in different groups of equal house lots that were hierarchically ordered into one perfect composition.

With the different classes of lot sizes, the plans of the terre nuove represent the societal and aesthetic ideals of order, harmony, hierarchy and completeness. The size of the lots reveals that there was no place for the few that outshine the lot, such as the old feudal gentry, but that there certainly were differences in status among the households. In fact, these differences are welcomed and elegantly ordered in the urban layout. In reality, however, the variety in the classes of the population of the terre never came to resemble the neatly ordered variety of the planned lot sizes.165

8.6 Aesthetic ideologies and their influence on the design of spatial urban order

From here on, this chapter will be concerned with aesthetic ideologies in relation to the spatial urban form. Apart from newly planned towns, newly planned urban ensembles in existing towns will also be considered, since there are more relevant written sources on this subject. It will be discussed how the design of new towns and new urban structures was influenced by aesthetic ideologies that are related to the idea of ‘order’. Specific attention is given in the following paragraphs to the subject of urban streets and their ‘ideal’ form, because this specific subject gives a clear insight into the aesthetic considerations in town planning at the time.

8.6.1 ‘Pulchritudo civitatis’

Since around the 13th century, beauty became an important element in the care for the spatial form of cities and towns.166 Contemporary written sources from central and northern Italy repeatedly stress the importance of a beautiful appearance of the city, which is often designated as pulchritudo civitatis (‘beauty of the city’). Documents show that in the 13th and 14th centuries the administrations of various cities, such as Florence, Bologna and Siena, made great efforts to regularise and beautify the appearance of the city for the sake of the pulchritudo civitatis. This policy influenced the building of new churches and cathedrals were built, largely financed and directed by the urban administrations, and various communal buildings and the building of new urban extensions surrounded by new city walls.167 Also, new monumental piazzas were created and existing streets were straightened and widened.168

In a general sense, the appearance of the city was regarded as a visualisation of the well-being of the civic community and the righteousness of its government- as is still the case today.169 In a meeting of the Sienese government in 1357 an officer petitioned for one of the streets to be re-structured, stating that ‘without order nothing good will be done’, and that the government of the city ‘is held to give the city order and rule’.170 In this specific context it may be assumed that ‘order and rule’ meant public order as well as spatial order, based on laws and regulations. Public order was thus being improved by spatial order.

the most densely settled quarter (the northwestern one) contained 104 hearths in 1356, while there were only 32 in the southwestern quarter. The distribution of wealth over different classes was about the same in both quarters. (according to a tax assessment of 1356; Romby & Diana 1985, pp.18-24; Friedman 1988, p.169) But in the least populated quarters all houses were simply built on the largest lots, while the smaller lots were only used as gardens there. From this, it may be concluded that, if the size of the lots was meant to reflect the wealth or status of the inhabitants, the less wealthy were probably lucky if they were settled in a quarter with less fellow inhabitants, because then they could take up the larger lots.

165 There are some interesting parallels to the aspect of the ordered variety of the lot sizes in the terre nuove, which are partly based on similar ideologies. The Hindu caste-system had its visible reflection in the planning of towns in India, as seen in the systematic variety in the size of lots. (Bezold 1876, The Dictionary of Art, v.15, pp.308-310) In the town of Friedrichstadt in northern Germany (1620) was planned with six different classes of lots. (Burns 2003) Other interesting examples regard Leopoldov in Slovakia (c.1769, Johnston 1983, p.90) Philadelphia (1682, Carter 1975, p.718), Grammichele in Sicily (1653, Johnston 1983, p.87), Saint Petersburg (1714, Stoob 1979, p.201), Cullen in Scotland (1822, Adams 1978, p.70) and the design of Victoria (1849) by James Silk Buckingham, which was based on the model of the South-Indian temple town (see plan in Bell & Bell 1969, p.197). In most of these cases the largest lots were sited in the centre and the smaller ones in the periphery.


169 Pampaloni 1973, p.7-9; Trachtenberg 1997, n.513, particularly regarding broad and straight streets. The orderly appearance of the city and its morphological elements as a symbol of social order and good government is expressed in Florentine administrative documents in terms such as ‘deorum’ (cf. n.184 below), ‘ad honorem et pulcritudinem ciuitatem’ (Pampaloni 1973, p.XXXV) or ‘ad deos et acrarium florentinorum et cumani inuisum’ (idem, p.69, doc.43). (see also Guidoni 1992 (II), pp.18-19.) According to LeGoff, beauty, becomingness and suitability were hardly distinguished between as reasons to undertake public works projects in the cities of the 14th and 15th centuries. (Le Goff 1983, p.68)

170 ‘[...] volendo esse commendantem moretulmente avere ciò che volere dare campimento e perfeczione a la detta fonte e via, e ciò rimane perciò in ciò per la presente non è ordine alcuno, e senza ordine non si fa alcuna cosa buona, e considerando che voi sete coloro che avete a dare e tutta la città ordine e regole [...]’. Consiglio Generale, Deliberazioni 22 dic. 1357, vol.166, c.37. Published in Braunfels 1953, p.253, doc.6.
This spatial order was warranted by special regulations, which were relatively abundant specifically in the cities of central and northern Italy. These regulations considered among others the rectification, plastering and cleaning of streets, the design of facades and of fortifications. In several cities, there were special officials or committees to look after the observance of these regulations, such as the ‘ufficiali de l’ornata della città’ in Siena.

At the beginning of the 14th century, the preacher Fra Giordano da Rivalto delivered a sermon in Florence from which it clearly appears how important it was considered for the city to be orderly structured and beautiful. He preached: ‘See how beautiful the city is when it is well ordered [...], the order in the city is a thing which is all too beautiful, and this order confers three qualities: beauty, strength and greatness’. ‘A comfortable city that is ordered and in harmony would be so strong that it could never be conquered, and it would conquer all other people [...].’ Subsequently Giordano compared the power of the well-ordered city with that of the saints in heaven, who also draw their strength from their collectiveness. So, according to Giordano order brings beauty, power and greatness to the city, all three seemingly being about equally important.

It is important to consider here, that ever since the writings of Saint Augustine pulchritudo was regarded a divine quality in Christian philosophy that was primarily to be achieved through harmony, order and unity, in this way not only being the opposite of ugliness, but also of badness. In part inspired by this thought, the idea of the godly city was thought to be at least partly accomplishable through the achievement of pulchritudo in the urban form and harmony and of order in the urban society. In this light, the devotion to morphological coherence in the street, the piazza and the entire urban structure can be regarded as a reflection of ideas on the civic society. This ideology appears to have been closely adhered to particularly in Italy since the 13th century.

In the cities of 13th- and 14th-century central and northern Italy, the wish to be the most beautiful appears to have led to a sort of contest among towns and cities. They strove to beautify their appearance by erecting new magnificent buildings and decorating existing ones, by re-ordering the urban structures and by cleaning and paving the public spaces.

But the will to order and beautify also touched the design of private buildings, particularly those that flanked important public spaces. For instance, with the creation of the piazza of the campo in Siena in 1297, and paving the public spaces.

Braunfels 1953, pp.95-98, 112; Finotto 1992, pp.98-104; Guidoni 1992 (II), pp.331-419. These publications all regard central and northern Italy; but it was not just in Italy where such institutions could be found. For instance, in Scottish towns officers called ínnos, who looked after plot boundaries and building regulations, were recorded since the late 13th century (Rosser 2000, p.340), and in Valencia (Spain) and Villingen (Germany) there were communal institutes that were to see to public space and building regulations from 1328 and 1310 on, respectively. (Cárcel Ortí & Trenchs Odena 1985, p.148; Jenisch 1999, p.37)

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172 Braunfels 1953, pp.95-98, 112; Finotto 1992, pp.98-104; Guidoni 1992 (II), pp.331-419. These publications all regard central and northern Italy; but it was not just in Italy where such institutions could be found. For instance, in Scottish towns officers called ínnos, who looked after plot boundaries and building regulations, were recorded since the late 13th century (Rosser 2000, p.340), and in Valencia (Spain) and Villingen (Germany) there were communal institutes that were to see to public space and building regulations from 1328 and 1310 on, respectively. (Cárcel Ortí & Trenchs Odena 1985, p.148; Jenisch 1999, p.37)

173 ‘Vedete come è bella la città quando è ordinata [...], troppo è bella l'ordine nella città, e quest'ordine è la verità, e verità è l'ordine che non si potrebbe mai rovinare, e insieme sono uno e l'altro. [...]’. Sermon no.94; Cited in Braunfels 1953, p.124, n.94; Frugoni 1983, n.246; Meier 1994, p.51. Giordano also compares the city to paradise, because order and love have such a great role in its organisation. (Meier 1994, p.50)

174 The importance of the city being beautiful is also reflected in many other written sources from central and northern Italy of the 13th century and later. (Braunfels 1953, pp.126-130; Bauer 1965, pp.7-9; Cherubini 1991, p.107; Finotto 1992, pp.104-112; Guidoni 1992 (II), pp.330-342) It particularly regards sources concerning urbanistic operations and other communal building operations. (Braunfels 1953, pp.86, 104, 110, 126-130) but also other sources such as sermons (Frugoni 1983, p.111) or chronicles (Guidoni 1992 (II), p.136).

175 According to some scholars it is very well conceivable that another deeper motivation for the devotion to beauty and order in the spatial form of the city is to be found in Christian, particularly Thomist doctrines. (Frisch 1971, p.69; Guidoni 1992 (II), pp.320-321; both referring to: Assunto 1963) These assertions are very vague, however.


177 Elsewhere in Europe, this phenomenon seems to have come to the fore only in the 14th and 15th centuries. (for Spain for instance, see Torres-Balbas 1954, pp.93-96)

178 Braunfels 1953, pp.121-122, 250, 110; Finotto 1992, p.85. That these regulations were successful in the case of the Sienese Campo is confirmed by Agnolo di Tura, who wrote in 1346 that it was one of the most beautiful piazzas in the world. (Finotto 1992, p.105)
8.6.2 The straightening of streets in existing towns and cities

For the beauty of the city it was considered very important that the streets were paved, wide, clean, regular and straight.\(^{181}\) Since around the 13th century, efforts were made to regularise the appearance of public space. Existing streets that were narrow and crooked, or on which houses or elements of houses (such as stairs, shop counters and jetties) protruded and recessed from the straight line, were widened, straightened and paved by public works. As far as these interventions touched the private buildings flanking the streets, this was legally founded on instituted regulations that gave juridical basis to among others expropriation and demolition.\(^{182}\)

In some documents streets that were not ‘beautiful, wide and straight’ (‘pulchra, ampla et recta’), were called ‘ugly and disgraceful’ (‘turpis ed inhonesta’).\(^{183}\) In the Florentine Statuto del Capitano from 1322-25 the reason for the laying out of a straight street across the city, connecting two opposite city gates, is formulated like this: ‘[…] to improve the becomingness and for the utility of the city of Florence and especially for beautiful and straight streets and entrances to this city, and so that the tradesman and people who import cereals from the regions of the Mugello and the Romagna can freely and directly reach the honourable portico of Or San Michele, where cereals are sold […]’.\(^{184}\) Similar motives can also be found elsewhere in the Florentine statutes, and also in administrative documents of other cities in central and northern Italy.\(^{185}\)

The quotation above clearly demonstrates that the ambition to create straight and wide streets through the city was motivated by the striving for a beautiful city in combination with the wish to improve the flow of traffic. But in many cases, public order was also a motive for the regularisation of city streets. Narrow and winding streets were considered to be a shelter for criminals and rebels because they were difficult to survey for the agents of the government.\(^{186}\) Such streets were likely to come under the control of the powerful noble families that often were very mighty within the neighbourhoods where they lived. Hence, it was for the public cause, in the interest of the city as a whole, that the streets were regularised. Narrow alleys were even completely closed off for this reason.\(^{187}\) In this respect the operations were more or less similar to the re-structuring of 19th-century Paris by Haussmann.\(^{188}\)

The regularisation of streets and the laying out of new streets in existing urban structures by the civic authorities only concerned public streets, or streets that were made public instead of private by this process.\(^{189}\) Although this process of regularising and ‘publicising’ was very slow, the idea was clearly aimed at the unification of the whole urban structure into one easily surveyable and aesthetically homogeneous whole.\(^{190}\)

This aspiration for physical unity found its motivation, at least partly, in a need for greater social unity within towns and cities. Many neighbourhoods in older cities were ruled by noble families with their clans, rather than by the urban government. The cityscape was far from homogeneous, with neighbourhoods dominated by castle-like defensive towers of the noble families, and streets and alleys that were closed off when clans fought out their intra-urban struggles. The cityscape was far from homogeneous, with neighbourhoods actually made practically impenetrable in times of unrest.\(^{191}\) Cases like this were rather extreme, but it is clear that in many cities and

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\(^{181}\) Braunfels 1953, pp.86, 99-122; Finotto 1992, pp.109-110. For instance, in a chronicle about the city of Manfredonia in southern Italy, the city is called ‘one of the most beautiful cities in the world’, among others because ‘having wide streets that contribute to the beauty of the city’ (‘una de pulchrioribus civitatibus de mundi’, ‘vias amplissimas habet, quae ad pulchitatem faciat ciuitatem’); Salimbene de Adam, Comicia; cited in Guidoni 1992 (I), p.811.

\(^{182}\) See for instance Pampaloni 1972, pp.XXXI, XXXV, 69, 115; Friedman 1988, p.205; Braunfels 1953, pp.86, 102, 104, 130; Finotto 1992, pp.104-112. In Florence several streets were straightened and widened. It regards among others: Via dei Cimatori (1298); Via dei Fabbri, Via Capponi and Via Palazzuolo (1318-1320), Via Calzaiooli (1389). (Lazzarechi 1994, p.72)

\(^{183}\) Guidoni 1992 (I), p.321; Ottokar 1498, pp.145-146. The term ‘viae pulcrae, ample et rectae’ is used many times in the Florentine documents concerning public works in the 14th century. (Pampaloni 1973, pp.XXXXIX) In 1322 the Via de’ Banchi was called ‘cordida, turpis et feide’ (‘filthy, ugly and smelly’) and was to be made ‘mutum pulcro, decoro et utili’ (‘very beautiful, becoming and useful’); (Richter 1940, 376, n.83).

\(^{184}\) ‘[...] ad augustum decorum et utilitatem ciuitatis Florentiae et precipue de pulchritudine et utilitate viarum et rerum viarum atque mercatorum et hominum redactae et dejectae granum et bladum de partibus Mucelli et Romandiole liberalius et directius accedere et pervenire possint ad honorem locum Orii Sancti Michaelis, ubi granum et bladum venditur’ (Statuti del Capitano del Popolo, 1322-25, Lib. IV, Rubr.8; see Braunfels 1953, p.102; Pampaloni 1973, doc.76) In this operation the Via della Piagentina and the Via Larga (present-day Via Cavour) were widened and straightened. (Pampaloni 1973, pp.88, 120; Friedman 1992, Trachtenberg 1997, pp.153-155. On Siena (statutes 1262) and Lucca (statutes 1308): Pampaloni 1973, p.XVIII, Guidoni 1981 (I), p.97; Corsi 1960; Ciampoli & Szabó, 1992. More on these and other Italian towns and cities: Braunfels 1953, ch.III; Guidoni 1992 (II), pp.325ff.; Bocchi 1998.

\(^{185}\) Braunfels 1953, p.103. It is remarkable that this is the opposite of what Alberti wrote in his architectural treatise in the 15th century. (see par.11.2) In his opinion, blind alleys and narrow roads make it easier to catch criminals and to confuse invading armies. Friedman 1988, pp.211-218. For example, according to the Florentine chronicler Villani (XI, 13) the street Costa San Giorgio was laid out in 1342 in order to give the communal militia easy access to a gate in the new city wall without being hampered by the powerful families of the Bardi and the Rossi, who dominated the neighbourhood. (Braunfels 1953, pp.100, 103)

\(^{186}\) Benevolo 1985, pp.834-846. The same motive also played an important role in the (re)planning of streets in many colonial towns and cities in various periods and continents.

\(^{187}\) On the difference between public and private streets, see par.9.14.

\(^{188}\) Benevolo 1980, pp.834-846. The same motive also played an important role in the (re)planning of streets in many colonial towns and cities in various periods and continents.

towns, especially in the older ones, the solidarity within the neighbourhood or the clan was often far greater than with the urban community as a whole. Therefore, much unrest and damage was caused by intra-civic controversies. In order to prevent such disharmonies, regulations were established by the communal administration with regard to public behaviour and social order as well as to architectural form and spatial order. With regular and public streets instead of irregular (private) streets and alleys, the government tried to strengthen public control over urban space and create an orderly structured whole out of a patchwork of different units. In this way, the regularisation, harmonisation and ‘publication’ of the urban space and architecture reflected the aspiration for social harmony.

This desire for social unity had different reasons. Struggles within the community were of course counter-productive and harmed the economy, for which reason unity was sought after. Also, the urban administration had an internal drive to enforce its power over all individuals and social structures and organisations, for which unity served as an excuse. But another, less mundane, reason was to mirror the image of the Christian ideal cities of the Augustinian Civitas Dei or the Heavenly Jerusalem, important elements of which were the strong faith of the inhabitants and the unity and harmony among them.

So, there were different motives for regularising the layout of streets: improvement of traffic flow, increase of governmental control and the beautification and unification of the city. In most cases the direct occasion to undertake action will have been a practical reason, but the documents clearly show that the ideology of regularity, order and unity, in social as well as aesthetic sense, was also a very important factor.

Straightening and widening streets was no common practice for all European cities in the 13th and 14th centuries. But the idea that regular order in urban form was beautiful and therefore good and worthy to strive for, was probably alive almost anywhere in the towns and cities in the christianised parts of Europe. Through the centuries, the ideal of regular order in urban form was put into practice in various ways, culminating in the era of ‘Haussmannisation’ and modernist town planning in the second half of the 19th century and the first three quarters of the 20th. The spatial order, however, was only a component of the ongoing operation of urban ordering in a broader sense, which was most clearly reflected in the extending set of communal regulations.

8.6.3 Beauty, straight streets and regular spatial order in towns and cities in contemporary written sources

In the paragraphs above, the aspects of beauty, order and unity of urban structures have been discussed. This discussion was about existing cities and towns, and not newly founded ones, although they are the basic subject of this study. This is because the clearest contemporary sources reflect on the older and larger cities, particularly of central and northern Italy, and not newly founded ones. But beauty, regularity and unity were also important considerations in the planning of many new towns, as well as in new urban extensions, particularly since about the second half of the 13th century. Very few contemporary sources, however, clearly tell so.

There are some exceptions, however. The foundation document of the new town of Mělník in Bohemia, edited by King Přemysl Ottokar II in 1274, mentions that ‘The fame of our kingdom grows best by the beauty and ornament of the towns’. Apparently, the beauty of towns was a relevant aspect, not only for the towns themselves but also for the greater whole of the territory. In the documents regarding the building of the fortifications of Firenzua, of 1336 and 1338, it is described how the walls should be constructed in order to be ‘beautiful and useful’ (‘pulcrius et utilius’), and how the northern gate should be made ‘strong, beautiful,

192 Ottokar 1948, p.148.
194 The quotations from Fra Giordano in the previous paragraphs must also be seen in this context.
196 Elsewhere in Europe, urban administrations similarly strove for regularity in the urban layout, but relevant written sources are scarcer there and developments seem to lag behind on central and northern Italy. Examples of towns and cities on which there is relevant information are: French cities such as Avignon and Dijon in the 13th- and 14th-centuries (Duby 1980, pp.300-301), Iberian cities such as Barcelona (García y Bello, Torres Balbás & L. Cervera 1998, pp.153-154), Valencia (Cércel Orit & Trenchs Odena 1985, pp.188-194, s.v. index ‘pulcrius’, and the Navarrería of Pamplona (where streets were made straight in 1324) (Lacarra 1978, p.195), and Lübeck and other towns and cities around the Baltic Sea where the laws of Lübeck were adopted. (Holt 2004) But in most northern towns and cities, such as in The Netherlands, sources on communal building regulations are relatively young, only from the 17th century and later. (Peters 1993, p.221; Meischke 1988)
198 ‘Der Ruhm unseres Königreiches wächst am meisten durch die Schönheit und Zierde der Städte.’ (Kuthan 1996, p.339) See also pars.9.1.2 (Jermen) and 9.1.3 (Polička).
useful and praiseworthy as it ought to be” (“fortis pulcro utilis et laudabilis sicut decret”). Less explicit is the example of the description of the project for the new town of Giglio Fiorentino from 1350. In this document it is determined that the houses that front onto the main streets must have a facade of 10 braccia high, built out of stone or brick. Although the document does not clearly say so, it is obvious that this was decreed in order to give the main streets a beautiful, wealthy and uniform appearance.

As became clear in the previous chapters, new towns that were founded throughout Europe since about the 13th century were commonly, though not always, laid out with streets that were straight or almost straight. It is highly likely that aesthetic aspects involving order, regularity and beauty played an important role in this. But unfortunately there are hardly contemporary sources that directly confirm this. As explained in paragraph 8.4, theoretical architectural treatises that elaborate on urban planning are only known from the 15th century and later. But fortunately there are written sources of other sorts that show how much straight streets were admired. Some of these have already been dealt with above, with regard to the straightening of streets in Florence and in the discussion of the straight and wide streets that were considered very beautiful.

In one of his sermons delivered in Florence in 1303-06, the preacher Fra Giordano da Rivalto used the straight street as a metaphor for moral righteousness, in contrast to the winding street, which stood for sin and deceit. Among others, he mentioned that the straight street is better because it is more uniform, by which he most probably meant that it is therefore also more beautiful. The metaphor of the straight street for righteousness and the winding street for sin was far from new. Similar symbolism can be found in the old testament and in various writings of the church-fathers. For instance, Proverbs 21:8 says: ’The way of the guilty is crooked, but the conduct of the pure is right’, and The Acts 13:10 says: ’You son of the devil, you enemy of all righteousness, full of all deceit and villainy, will you not stop making crooked the straight paths of the Lord?’ The same traditional imagery can be found with Gregory the Great, Isidore of Sevilla and Saint Bernard, who compared foxes with demons, liars and heretics, because they move along tortuous paths. This imagery was also used in the fable Van den Vos Reynarde, originally from 12th-century northern France, in which the sly fox is stealing along winding paths in order to get what he wants by lying and cheating. All in all, it is clear that the general public will have associated winding roads or paths with negative notions, particularly in contrast with straight ones. This must also have been generally the case with words such as ‘bended’, ‘crooked’ and ‘winding’ in contrast to ‘straight’ and ‘right’.

Of course, these examples all concern allegorical imagery, which may not be taken as representative for actual town planning. But, on the other hand, there is no reason to ignore this material. There is not much information on the way people thought about the organisation of (real or imaginative) space, and the material discussed above certainly presents some relevant clues in this matter.

In texts that describe existing towns and cities, such as laudationes, one can also find descriptions of streets. For instance in a description of the city of Florence from 1339 in which the city is extolled, an anonymous author proudly writes that ‘The streets of the city are mostly large, straight and paved with stone and partly with brick [...].’ A 12th-century laudatio on the English town of Chester says that the town ‘(...) has two main streets, straight and excellent, in the form of the blessed cross’. These texts clearly illustrate the importance that was ascribed to the straightness, width and order of the city-street.

Many other cities and towns were praised for their unique beauty in laudationes. With these, it is remarkable that the streets are often celebrated for their wideness and for being paved, but if they are not
straight they are never praised for being winding, crooked or curved. In fact, a description of Valencia from 1393 explicitly uses negative words to portray the irregular form of its streets. It says that the city is built ‘[...] by the Mores according to their customs narrow and miserable, with many narrow and winding alleys and other deformities [...]’ and it also speaks about ‘[...] these deformities that are in this city with Moorish alleys and other evils [...]’. In this description there is a direct link between the winding street and badness, just as in the biblical and allegorical texts. Here, however, this link is no longer purely metaphorical but very direct, in the sense that the text is about real streets and real ‘heathens’.

From the many streets that were newly created in new towns and new town extensions, there are very few documents concerned with the planning process that comment on whether they were (to be) straight or not. For the case of the terre nuove fiorentine, for instance, there are just two documents (as far as I know) which mention that streets are (to be) straight. Apart from this, none of the documents mention a straight line at all, not even the document that describes the plan of Giglio Fiorentino into detail. This document describes the streets as they are to be laid out, with their relative place and their width, but it is not mentioned that they are to be straight, although one can be fairly certain of this by analogy to the other Florentine new towns. (see figs. 3.6-3.27) There is a more or less similar source for the town of Fontanetto Po, which was re-founded in 1323 in northern Italy by the monastery of San Genuario and the marquis of Monferrato. (fig. 8.8) The foundation document described that the main street is to connect the two town gates in a straight line: ‘ab una porta ab alia fiat via recta’. The two intersecting streets are also indicated to be straight. Although the four sides of the original outline of the town are also straight, these are not explicitly described as such. Neither is it mentioned in either the case of Giglio or Fontanetto that the various streets and sides of the outlines were connected by right angles.

Of course, the streets were purposely made straight and connected by right angles. Apparently, it was rarely found necessary to mention this in the documents, as it was regarded more or less self-evident: when one plans a new street, it is made straight, and when one plans another street intersecting it, it is made perpendicular to the other one, unless there are special circumstances that demand other solutions.

There is one contemporary document that does clearly mention that streets ought to be planned straight, but this not with regard to towns. It is a 13th-century document from Castile which prescribes the layout of military camps: ‘it is just like the form of a village. When it is made oblong, it must be given a street in the middle completely straight, and when it is made square, it must be given two or better four, some in the long direction, the others perpendicular.’ Apparently, the streets in military camps and in villages ideally ought to be straight and the structure ought to be orthogonal. I am convinced that this must also have been the basic idea for the plan structure of towns and cities in general, but unfortunately no contemporary written source is known that clearly says so.

It is an important indication, however, that the ideal city described by Francesc Eiximenis in the late 14th century makes a clear distinction between the layout of villages and towns. In his De magnificis et commodis civitatibus, the author stresses that the streets of a village should be perpendicular to each other, while the streets of a city should be straight and orthogonal. He writes: ‘...per bellae de la ciutat per bellae de la ciutat per bellae de la ciutat per bellae de la ciutat. (Ortí, Milagros & Trenchs Odena 1985, pp.1492, 1493, s.v. index 5.2) The word ‘deformitas’ is used in this context to refer to the winding streets of the old town of Valencia, and the author explicitly states that these streets are beautiful. For the beauty of the city (‘per bellor de la ciutat’) the authorities sought to avoid anything that would appear as Moorish, in order to wipe out the memory of the infidel. (Ortí, Milagros & Trenchs Odena 1985, pp.1492, 1493, s.v. index 5.2) In a decree regarding the piazza that was laid out in front of this palazzo, it is established that the new piazza was ‘...que es así como la puebla de una villa. Si fuere luna, deben de ser una calle enmedio derecha, y si fuere cuadrada, deben de ser casas cuadradas, y se van en larga, las otras en corriente. (Pereda II, t. XXIII, f. 60; Alomar 1976, p.50) It regards a chapter of a general revision of laws, the so-called Siete Partidas, which was enacted by King Alfonso X (1252-84). The relevant chapter is titled: ‘How the military camp should be laid out’.

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208 For instance: Bonvesin de la Riva about Milan, in De Magnolibus Urbis Mediolani from 1288. (Guidoni 1991 (II), p.143)
209 (…) per moros a lur costum estreta e mezquina, ab molts carrers estrets volcats e altres deformits (…) (Garcia y Bellido, Torres Balbis & Cervera 1968, pp.145-153) The word ‘deformitas’ can be found again and again in the records of the Valencian committee that was to see to the public space in the city. It is often used for the old, narrow and crooked streets and the bridges and balconies above them. Straight streets, on the other hand, are described as beautiful. For the beauty of the city (‘per bellor de la ciutat’) the authorities sought to avoid anything that would appear as Moorish, in order to wipe out the memory of the infidel. (Ortí, Milagros & Trenchs Odena 1985, pp.1492, 1493, s.v. index 5.2)
210 Both documents regard the main streets of Firenzuola. The first one is the short description of the town that is to be built in the legislation document (see par. 3.8.4), and the second one is a decree of 1378, prohibiting bridges over the streets. It is explicitly mentioned that the two streets connected the four gates by recte lines. (Richter 1940, pp.382, 385, docs.5a, 5b; Friedman 1998, pp.329, 331, docs.13, 15)
211 See appendix A.
212 Panerò 1979. The general description of the town given in the document fits the structure of the town as it presently exists, but oddly enough, the indicated dimensions do not all seem to have been followed in the layout.
213 There are other sources, however, that clearly indicate that right angles were regarded as important for the beauty of urban spatial form. For instance, in the Florentine chronicle of Giovanni Villani, the writer complained that the plan form of the Palazzo Vecchio was not rectangular. (Giovanni Villani 1823, book IX, ch.XXXV; Trachtenberg 1997, pp.201, 291, n.92) In a decree regarding the piazza that was laid out in front of this palazzo, it is established that the new piazza was ‘...que es así como la puebla de una villa. Si fuere luna, deben de ser una calle enmedio derecha, y si fuere cuadrada, deben de ser casas cuadradas, y se van en larga, las otras en corriente. (Pereda II, t. XXIII, f. 60; Alomar 1976, p.50) It regards a chapter of a general revision of laws, the so-called Siete Partidas, which was enacted by King Alfonso X (1252-84). The relevant chapter is titled: ‘How the military camp should be laid out’.
The 14th century has a regular orthogonal layout: the ‘(...) beautiful city should be square: because like that it is more beautiful and more ordered’, ‘and it is said that the streets run straight from the eastern gates to the western gates: and those from the south to the north: so the straight and beautiful streets run from each of the secondary gates to the ones on the opposite side.’

Thus, the straight streets clearly form an integral part of an orderly and implicitly orthogonal composition. It should be well noted in the present context, that the only explicit reasons Eiximenis gives for this are beauty and order; not pragmatics of design, nor commodity, nor defence.

So, this only source that gives a description of the plan-form of an ideal city from the period in between antiquity and the 15th century clearly demonstrates that ideological considerations of an aesthetic nature had great relevance for thought on urban form: it was regarded very important for the city to have a beautiful layout. Essential factors for this beautiful layout were straight streets in a regular structure and a regular square outline. Apparently, orthogonal urban order was experienced as beautiful. This is also demonstrated by the many towns and urban extensions that were built in the 13th and 14th centuries on regular plans, with regular allotments, straight and wide streets, and (to a lesser extent) rectangular outlines.

8.6.4  Cosmological meaning of regular orthogonal order in the design of urban structures

It clearly appears from the various texts cited above, that great importance was attached to regular order in urban layouts in the period under consideration. Regular spatial order was thought to bring beauty and to promote order and harmony in the urban society. It was also seen as a reflection of the ideal of societal harmony. It seems, however, that there may well have been a further meaning to regular order in the design of urban structures, which has a more abstract cosmological nature. In paragraph 6.4.4 it has already been argued that the complex geometrical order in the design of the town plans of the terre nuove probably referred to cosmological ideology. In my opinion, it is likely that the simple geometrical order of the regular orthogonal plan had a similar meaning in the period under consideration.

When one studies the layout of a regularly planned town, such as for instance Grenade-sur-Garonne, one can recognise significance in the basic geometry of the straight roads, the right angles and the rational relations of the dimensions. In my opinion there is a message in the regularity of the plan, which reads: order and harmony. Apart from creating beauty and promoting societal order, a further reason to strive after this regular spatial order was that order was thought of as the system on which God had created the universe.

Order was seen as the source of harmony and beauty, and all three they were essentially thought of as divine

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216 See par.8.2.1, particularly n.59; Puig y Cadafalch 1936, p.1.
217 The same holds partly true for some of the other written sources mentioned above, but there are also more pragmatic reasons mentioned in the other sources. The difference is, of course, that Eiximenis was writing about an ideal city: although it probably could have actually been realised, he did not have to cope with the circumstances of reality in his description.
218 See also Marco Polo’s description of Beijing in the following paragraph, from which it also appears that the regular orthogonal town plan was very highly regarded.
219 In the traditional writing of the history of town building this has, however, mostly been denied or regarded as anomalous for that period. It has long been thought that the straight street and the highly ordered, symmetrical, orthogonal town plan were new developments from the ‘renaissance’ and that they are therefore typical of ‘modern times’. This traditional, basically 19th-century, view is still more or less generally adhered to. In chapter 11 this controversy will be discussed in detail.
220 Lilley (2002, pp.163-165) has the same opinion, but in his idea the symbolical meaning behind the regular spatial order of new towns is mainly connected with the use of complex geometry in the design.
qualities.221 For the current subject of town planning, it is essential that in spatial sense order was always conceived as regular mathematical order.

As far as I know, there are no contemporary written sources that plainly demonstrate that the form of the regular, orthogonally ordered town was actually thought of as referring to divine order. There are, however, a number of indirect indications that point in this direction. The most important and the most elucidative of these will be discussed below.

One primary element of the regular orthogonal town plan is, of course, the fact that it has crossing lines at right angles that point in four different directions, implicitly similar to the directions of a cross. It is a known fact, that in contemporary thought on cosmological spatial order, a highly important role was played by the four directions of the cross. The right-angled cross set within a square or a circle was already a symbol of the cosmos or of cosmic harmony in pre-historic times, and this symbolism did not lose its power in Christian culture. A specific variant of this symbolism, for instance, is the image of paradise as a garden with four rivers flowing in four directions from a central source, as a pars pro toto for the ideal universe.222 The division of an essentially complete wholeness into four parts, often directly connected to this spatial division, was also acknowledged in other aspects of the cosmos, such as the elements, the winds, the humours, the cardinal virtues, the evangelists, etcetera. And the cosmic cross symbol was, of course, also connected with the Holy Cross, with its rich allegorical symbolism.223 In the 7th century, for instance, Bede and Sedulius Scotus wrote: ‘What is the importance of the cross if not that of the quadrate of the world’.224

For the present subject it is highly relevant that the cosmos was often depicted or described symbolically as a city. Already in antiquity one finds the four-parted city, often placed on a mountain in the centre of the world, as a cosmic symbol.225 In Christianity this symbol was taken over from the Jewish tradition: the Heavenly Jerusalem, standing on a mountain in the centre of the universe represented the ideal world.226 This Heavenly Jerusalem has been depicted in different forms, but the four directions mostly were an important element of its form, whether symbolised by four radiating streets or by four sides of a square outline.227 (see figs.8.1, 8.3)

Various scholars have written about symbolic meaning in urban plans of the 11th to 15th centuries, in which some sort of crosswise organisation is a central element.228 A relatively well-known phenomenon is the crosswise layout of an ensemble containing four or five churches in an urban setting.229 These crosses of churches have been interpreted as deliberate attempts to mirror the form of the heavens in cities.230 Another phenomenon in urban plans that carried symbolic meaning, was the motif of two main streets that cross at more or less right angles near the centre of a settlement. Such crossroads were often regarded as a sort of centre of the world, a so-called omphalos.231

With regard to urban structures, there are contemporary written sources that explicitly refer to this symbolism of the cross and the four cardinal directions of the world. For instance, in the late-12th-century laudatio on the city of Chester that has already been cited in the previous paragraph, the market is described as the centre of the city, which is connected to four streets in the form of ‘the blessed cross’ so that products from all four directions of the world can be brought to the market. The four gates of the city would have been protected by the four evangelists, since four churches dedicated to these saints were sited near to them. In this description the actual shape of the urban structure is somewhat distorted in order to adapt it to the ideal scheme, whereby the city and its central cross of streets are made into a centre of cosmic significance.232 In other laudationes, for instance on the cities of Pavia and Florence in Italy, similar interpretations of the urban plans can be found.233

These texts clearly give symbolic interpretations of the urban structures, but only in literary-allegorical sense. But outside the confines of the literary allegory, cosmological significance was attributed to cross-
roads just as well. The fact that chapels and high-courses were often erected at crossroads, and that justice was often administered in these places clearly demonstrates this.\(^{234}\) (fig. 8.9)

Another primary element of the regular orthogonal town plan is, of course, the straight street. In the previous paragraphs it is already demonstrated that there was an explicit preference for the straight street over the winding street and that the straight street was generally seen as a symbol of moral righteousness.

One more element with a positive symbolic connotation, which often formed part of orthogonal spatial structures was the square. The geometric form of the square was described as symbolising moral perfection.\(^{235}\) This indicates once more that regular geometric order was very highly valued.

All in all, it clearly appears that the essential elements of spatial orthogonal order - straight lines that cross at right angles, pointing in four directions - generally had a positive symbolical meaning.

Further support for the idea that there was a ‘higher meaning’ to regular orthogonal urban form, can be found in references to the form of the Heavenly Jerusalem.\(^{236}\) In the bible the form of the Christian utopia of the Heavenly Jerusalem is described as a city with a square circuit of walls, with three city gates equally spaced on every side.\(^{237}\) (fig. 8.1) This description suggests that the streets inside go straight from one gate to the opposite, thus forming an orthogonal grid.\(^{238}\) This image of the Heavenly Jerusalem clearly inspired Eiximenis’ description of an ideal - but feasible - city, dating from the 1380’s. The capital city that he describes also has a square circuit of walls with twelve equally-spaced gates. Furthermore, it has ‘straight and beautiful streets’ running from every gate to the one on the opposite side, forming a regular orthogonal plan.\(^{239}\)

A rather different contemporary text which is telling of the experience of regular orthogonal order in urban structures is Marco Polo’s description of the plan of Dadu, nowadays Beijing, where he stayed in 1275. He writes that ‘The new city is laid out in the form of a perfect rectangle […]’, with three gates on every side\(^{240}\), and ‘The whole plan is laid out in highly regular form. […] The streets are so straight and wide that you can see right along them from end to end from one gate to the other. […] All the plots of ground on which the houses of the city are built are foursquare, and laid out with straight lines. […] Each square plot is encompassed by handsome streets for traffic; and thus the whole city is arranged in squares just like a chess-board, and disposed in a manner so perfect and masterly that it is impossible to give a description that should do it justice.’\(^{241}\) (fig. 8.10)

What Marco Polo probably did not know, is that Dadu, as well as various other Chinese capital cities, was built to resemble the cosmos in its basic traits. From pre-modern China as well as India there are clear sources that demonstrate how the orthogonal urban plan, oriented on the cardinal directions and having a

\(^{235}\) Among others, the philosopher Pierre de Roissy wrote so in the early 13th century. (Bucher 1972, p. 50, n. 2)
\(^{236}\) See par. 8.1.1.
\(^{237}\) Revelations 21:9-27; Ezekiel 48:30-35.
\(^{238}\) In some depictions of the Heavenly Jerusalem the area within the walls is represented by a grid of small squares in two tones, like a chessboard. (see fig. 8.1 and Esmeyer 1978, fig. 60; Poiron 1986, pp. 25-29 (11th c.); Cardini 1994, fig. 196 (11th c.)) It is possible that this has to do with the idea of the orthogonal town plan.
\(^{239}\) See par. 8.2.1.
\(^{240}\) The number of the gates is probably wrong: old Chinese sources only mention 11 gates. (Yule & Cordier, 1975, p. 377) Marco’s mistake may have been caused by a confusion with the, for Christians all-important, image of the ideal city of the Heavenly Jerusalem as described in the bible. (cf. fig. 8.1)
rectangular outline, was conceived as a reflection of the universe.\footnote{242} No such clear sources are known from Europe in the period under consideration. Nevertheless, it seems likely that similar ideas have played a role there, given the clues discussed above.

It is clear that Marco Polo – just like Eiximenis, Fra Giordano and, in my opinion, most people from their time would have done – admired the amount of regularity and order that was warranted in the plan of Dadu by its right angles, its straight streets and its rectangular lots and outline. Back then, regular spatial order generally was seen as beautiful. In fact, geometric regularity was still regarded as precondition for beauty, as it was thought that God had created the universe with the help of geometry.\footnote{243} Only since the 18th century this is no longer the rule, when the aesthetics of ‘the picturesque’ became appreciated in the perception of the natural and cultural landscape.\footnote{244}

In my opinion, the sources discussed above indicate that the regular orthogonal order in the spatial structures of settlements in Europe from the 12\textsuperscript{th} to 15\textsuperscript{th} centuries can be interpreted as referring to a higher order. The geometric order of the settlement was based on the study of the order of the divine creation, in order to make the settlement harmonise with the divine creation, so that it would receive His blessing. Just as in pre-modern China and India, the settlement was to reflect certain aspects of the cosmic divine order, so that it would auspiciously be in harmony with it.\footnote{245}

But the aspiration to achieve aesthetic and cosmological order was not the only reason to take the effort to bring regular order to urban layouts. The striving for spatial urban order was related to various aspects, such as the tradition of design, the practice of setting out a plan, the practice of settling, administration and taxation, ideas on social order, and symbolic thought. And of course these aspects are partly interconnected.\footnote{246} It is impossible to discern what the relative importance of the various different aspects was at the time and to what degree they were consciously mediated over in the process of design: much as in present-day design it is very difficult to distinguish between such different aspects as motivations in the brains of the designers, not least because they often are not even explicitly thought over by them.

One should also be aware of the fact that the orthogonal plan is a relatively uncomplicated and pragmatic scheme to bring regular order to urban form. Therefore, many people tend to see it as a practical solution without any further meaning.\footnote{247} In some cases more or less orthogonal forms may even have come about almost ‘accidentally’. For instance when a settlement developed at a location where two traffic routes crossed at more or less right angles, thus favouring an orthogonal layout.\footnote{248} But looking beyond practical considerations, one must ask why in many cases there clearly was, and still is, the ambition to make urban form regular, even when it would be a lot easier set out plots and streets in a layout conforming to the existing landscape. I believe that the regular spatial order which is strived after, is to a considerable degree the result of the desire, or rather the need, of planners to make their product fit into their view of the world, their cosmos.

In the period under consideration there was a dominant ideology that demanded human acts and products, no matter how trivial, to contribute to the realisation of the ideal Christian society, by following God’s rule and imitating the ‘rules of divine order’, among which geometry and arithmetic were thought to be very important.\footnote{249} So, although there may not be any specific contemporary written sources that unambiguously attest to the link between spatially regular town planning and the concept of divine order, this link certainly fits in very well with contemporary ideology.

\begin{footnotes}
\item[242] See Wu 1963; Wheatley 1971; Skinner 1977, pp.3-101; Liangyong 1986; Boerefijn 1999 (2); Heine Geldern 1959; Begde 1978; Boerefijn 1997.
\item[243] See par.6.4.4. It should also be reminded that beauty was directly related to the divine qualities of truth and righteousness. (see n.175) A similar attitude can be read in a sermon of Fra Giordano da Rivalto, directly related to the form and organisation of the city, see par.8.6.1.
\item[244] See ch.11, n.52.
\item[246] The aspects of design and setting out are discussed in chapter 6 and in par.9.6, and the administrative and social aspects are discussed in pars.10.3.1, 10.4, 8.5.1 and 8.5.2.
\item[247] See also par.10.2.1.
\item[248] Lavedan & Hugueney 1974, pp.10-11.
\item[249] See pars.6.4.4, 6.5.
\end{footnotes}
Regular orthogonal order in urban planning probably referred to the divine order of the cosmos. This does not mean, however, that it was necessarily explicitly thought of as such. The concept in general had a higher symbolic meaning of a largely implicit nature - as, in a certain sense, it still has today. One must not think that geometrically regular urban forms were always thought of as reflecting divine order; but I believe that at least there were 'intellectuals' who consciously understood this higher meaning. I do not claim that the planners of highly regular, orthogonal urban layouts such as Grenade-sur-Garonne (fig. 2.22), San Giovanni Valdarno (fig. 3.12) or Elburg (fig. 7.3) necessarily worked explicitly from the idea of following the design of divine order, but in my opinion they must at least have felt a very strong urge to make the plans as regular as they could, which was partly driven by a semi-conscious thought of the symbolic value of spatial order in relation to the larger world, e.g., the cosmos. The spatially regular urban plan probably was not conceived as a symbolic form to be read, in the sense of a 'sign' visible to the human eye. Rather, it must have been an allegorical symbol, which may not have been completely comprehended by people from all layers of society, but which played an important role in the cosmology of the leading thinkers of the age and the more educated people in their slipstream.

8.7 Conclusion

The conclusion of the first paragraphs of this chapter (pars. 8.1 to 8.5) must be 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.\textsuperscript{250} There are some clear exceptions, however, such as the 'cities of the sun' of the Hussites, town foundations of other religious movements with eschatological expectations, and the (projects for the) foundations of Count Reinoud I of Gelre. It is likely, however, that with many other town foundations, as well as in existing towns and cities, societal ideologies, such as those concerned with the Augustinian Civitas Dei, also played a role, but mostly this was probably implicit rather than explicit. Only very rarely did such ideologies recognisably influence urban form.

But it may well be that the fact that hundreds of towns were newly created, had something to do with certain societal ideals. Towns and cities may often have been good places to live and to conduct affairs, and they often formed advantageous possessions to their lords, yielding financial and political profits. But the

\textsuperscript{250} It should be noted that this was barely different in the 15\textsuperscript{th} to 17\textsuperscript{th} centuries. The ideas expressed in the treatises of this time, mostly came to realisation only for as far as the fortification was concerned: mundane techniques rather than high ideals determined the actual realisation of urban form. (Rahmsdorf 1999, p. 50)
concept of the free and politically integral urban society was also a societal ideal, which was among others inspired by biblical and theological texts, foremost Augustinus’ Civitas Dei. Therefore, foundations of new towns may well have been inspired by higher ideologies, apart from being the result of more mundane considerations. 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 the foundation of cities is one of the most important functions of a king, comparable to the foundation of the world by God.  

So, societal ideals seem to have influenced the foundation of new towns and their shapes up to a certain extent. But it remains very vague up to what extent precisely. In paragraphs 8.5 and 8.6 it has been argued that ideas on the structure of urban society and aesthetic ideologies also influenced the shape of new towns and urban ensembles. The differentiated size of the house lots in the Florentine terre nuove may have been (partly) based on ideas of social harmony by a careful composition of different classes, and the equal size of the house lots in many other new towns may have been based on ideas about civil equality. Furthermore, 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. In fact, ideas on 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.

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