

Paper Palaces

THE RISE OF THE RENAISSANCE
ARCHITECTURAL TREATISE

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Chapter Two

ON FILARETE'S

LIBRO ARCHITETTONICO



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THE TREATISE OF THE Florentine Antonio Averlino, otherwise known as 'Filarete' (from the Greek *philaretos* meaning 'lover of virtue'), was the second work of architectural theory in the Renaissance following that by Alberti. Like Alberti, the author was an architect who dedicated himself to theoretical studies. Filarete began as a sculptor and became an architect only in a much later stage of his career. As far as we know, he received all of his most important commissions outside his homeland, Tuscany. He executed the central portal, signed and dated 1445, of St Peter's Basilica in Rome, for Pope Eugenius IV (plate 1). The bronze plates which cover the door remained in place even after the reconstruction of the Vatican basilica and are the principal testimony to Filarete's sculptural activity. His stay in Rome was suddenly interrupted in 1447, when he was accused of stealing some relics, considered at that time a most serious offence. Filarete went first to Venice and then Milan, where he worked for Francesco Sforza, who had become duke in 1450. In Lombardy up until the mid-1460s, Filarete worked mainly as an architect, becoming (along with Benedetto Ferrini, the other Tuscan master in the service of the court) the major representative of Renaissance culture in the state. All Filarete's Milanese work is connected to his patron, Francesco Sforza. At the duke's behest, Filarete worked on the reconstruction of the castle of Milan and on the design for the Ospedale Maggiore, founded in 1456. In 1457 he was granted a brief period of leave in order to go to Bergamo, where he received the commission for the new cathedral. The cultural and formative differences between Filarete and Lombard architects, however, eventually led to the Florentine master distancing himself from them and the project of Milan cathedral, to which he had been assigned by the duke. In 1465 Filarete also gave up the Ospedale Maggiore project, although he had already

original version in Italian vernacular, can in turn be broken down into two branches, the first of which derives from the version written for Francesco Sforza, while the second contains a revised text prepared to go with the new dedication to Piero de' Medici. Of this second branch, the *Codex Magliabechiano*,¹ the best witness to the text and the most complete as regards the illustrations, contains the author's final revision of the text as well as the dedication to Piero.

The second group of manuscripts consists of the Latin version of the text. This was written for Marcia Corvino by the humanist Antonio Bonfini: Bonfini did not translate literally, but instead made cuts and revisions which were guided by the text of Vitruvius (Hajnöczy 1992).²

Filarete's treatise was not printed until modern times. Its characteristics, such as the continuous narrative dense with parentheses and anecdotes, and the patchy treatment of architectural theory, made the treatise of little interest to later generations. Vasari (1906, 457–8) mentions the work and the codex owned by the Medici, but criticises harshly both the treatise and its author: 'And even though there may be some good things in it, it is nevertheless for the most part ridiculous and stupid such that it is probably useless'.³ The first studies of Filarete's treatise date from the nineteenth century: in 1890 von Dertingen published a first, partial edition and a summary of the treatise, while an ample summary with excerpts was included in a volume by Lazzaroni and Muñoz in 1908 (242–77). More recently Filarete's theory has been considered in the context of the architectural practice of his time by Sialman (1959), whilst the theory was systematically analysed in a study by Tigliet of 1963. Filarete's treatise thus acquired a well-defined position in the field of architectural theory (Kruft 1994, 51–5). Furthermore, an English translation and a critical edition in Italian have both been published, in 1965 and 1972 respectively.

Of all the architectural treatises of the Renaissance, Filarete's is the only one which has a narrative structure (if we discount the *Hypnerotomachia Poliphili*). In the text, the author imagines that his patron, Francesco Sforza, has given him the task of designing a city with the flattering name of Sforzinda. He goes on to describe the plan, the necessary materials and the organisation of the project. While working on the port, a 'Golden Book' is found which tells of an ancient king, Zogalia, and a city of Physiapolis. The buildings of this mythical city, described in the 'Golden Book', become the model for those in the new city.



1 Detail of Filarete's central portal to St Peter's Basilica, Rome, for Pope Eugene IV, signed and dated 1445. Scene from the martyrdom of St Peter.

contributed a design for it, and had, indeed, overseen the first stages of its construction. Sometime in the 1460s he returned to Florence. The year of his death is unknown; the last thing we know is that, in 1465, he was planning a trip to Constantinople.

THE DATE AND CONTENT OF FILARETE'S TREATISE

Filarete wrote the treatise (called by him the *Libro architettonico*) in the latter stages of his period in Milan, and he dedicated it to Francesco Sforza. As his activities in Lombardy drew to a close, and with the aim of strengthening his ties to Florence, the author added a chapter (Filarete's term is *libro*, or 'book') dedicated to the patronage of the Medici family, and wrote a second dedication, this time to Piero de' Medici. According to Vasari (1906, 457), this last addition and second dedication were written in 1464, and modern scholars have confirmed this date. For the preceding twenty-four books, Spencer (1956, 93–103) proposes 1461–2 for Books I–XXI, and 1464 for the books on drawing (XXII–XXIV) and the book dealing with the contemporary architectural commissions of the Medici (XXV). Grassi, on the other hand, dates most of the work to the years 1460 and 1461, although he allows a final date of 1464, taking into account the various revisions of the author (Filarete 1972, xi–xiii).

The manuscripts reflect the stages of composition of the work, and can be divided into two groups. The first group, which comprises the

¹ Florence, Biblioteca Nazionale, II, I, 146.

² 'E connectebat alcuni cosa buona in essi si ritrovava, e nondimeno per lo più ridicola, e tanto sciocca, che per avventura è nulla più.'

Filarete chooses to tell this story in the form of a dialogue between the architect-narrator and the members of the Milanese ducal family: Francesco Sforza, Duchess Bianca Maria Visconti, and their first-born son Galeazzo Maria. It seems that Filarete took as his model the works of Plato (Omians 1971), who addresses arguments relevant to the city and to creative activity in particular in the three dialogues *Timaeus*, *Critias* and *Laws*. Filarete was probably introduced to Plato by the humanist Francesco Filelfo, who might also have brought to Filarete's attention medieval works which cited the activity of the builder as one of the qualities of a prince, a theme which is clearly fundamental to Filarete's treatise (Lang 1972).

The continuous narrative structure and the fact that each building is proposed as a unique project makes the text ideally suited to being accompanied by illustrations. In fact, Filarete often refers to illustrations in order to explain his intentions more clearly. The illustrations were therefore not devised simply as an optional ornament to the manuscript, but are instead integral to the text. Filarete's treatise can only be considered complete when it is seen as a synthesis of word and image.

The continuity of the narration is interrupted after Book XXI with three subsequent books dedicated to drawing. The dialogue structure is retained, but the interlocutor is now solely Galeazzo Maria Sforza. The books on drawing are based on the work of Alberti, that is, the *De pictura* and the *Elementi di pittura*. Filarete repeats the principles of Alberti, although in a less organic fashion and with additional points derived from his own experience and personal taste. Furthermore, he excuses this digression on drawing by citing the subject's traditional importance in the education of a young prince. However, in order fully to understand this digression, one must remember that Alberti had asserted in *De re aedificatoria* (Book IX, ch. 10) that the principles included in his *De pictura* were essential to the education of an architect. The twenty-fifth and final book of Filarete's treatise deals with Medici buildings in general, and is particularly important for the information it contains about the palace which was the Milanese seat of the Medici bank.

CONTEMPORARY WORKS REFLECTED IN THE TREATISE

As can be seen from the above summary, Filarete's treatise is a text which can be read on different levels. The author uses the narrative system principally to interject ample references to his own professional experience, therein describing his projects for the Ospedale Maggiore (Book XI) and for the cathedral of Bergamo (Book XVI). The fact that the work's dedicatee, Francesco Sforza, also becomes a protagonist

in the treatise echoes a common characteristic of the literature written for the courts of the fifteenth century. The encomium of the ducal family of Milan thus becomes one of the principal components of the text. This is expressed not only with outright praise, but also in a more elaborate and symbolic way. The name of the mythical king, Zogahai, is for example an anagram of Galeazzo (Galeazzo), the Sforza heir. Moreover, while building Sforzinda the duke baptises the ports of the city in terms which allude to his wife and children (Book V, 145-6). He leaves the naming of the last port to the architect, who designates his own name, exalting his role as creator and emphasising his pride as member of the court. As to the court itself and his work there, Filarete introduces into the text some references which record certain contemporary circumstances and events. He cites the humanist Tommaso Morroni da Rieti and the poet Francesco Filelfo as the authors of the dedicatory inscriptions set up on the Ospedale Maggiore (Book XI, 320-21). Filelfo is also remembered as the interpreter of the 'Golden Book', and this hints at both his possible position at the Sforza court and his role as Filarete's guide to ancient texts. As to the organisation of the workers in the treatise, the figure of the *commissario* — who is often referred to as the site administrator, second only to the duke and in close contact with the architect — reflects the historical role in the Sforza court of the commissary general, Bartolomeo Cadolo.

Considering the treatise in this light, one becomes conscious of the numerous references to situations and initiatives which, although clear to the author and the reader of the time, are quite difficult to interpret today. This kind of difficulty is exemplified in a passage from Book VII, in which Filarete describes with great detail the structure of the dome of the cathedral in Sforzinda and which Spencer (1959) has in turn linked hypothetically with Filarete's work on the cathedral of Milan. A passage in Book XVI is even more specific. Here Filarete responds to the duchess's request for a new church and monastery for the Gerolamites by providing an actual design: this episode has been related to the ducal project for San Sigismondo in Cremona, for which Filarete is reputed to have drawn up a design in c.1460 (Spencer 1956, 99-100; Filarete 1972, 458-9; Giordano 1988, 117-20) — although when the church was begun in 1463 it was based on a design which cannot be attributed to Filarete. It is therefore evident that Filarete's treatise, in contrast to the other theoretical works of the fifteenth and sixteenth centuries, can be seen as an explicit historical document, albeit of arduous interpretation.

The role that Filarete claims for himself and, consequently, for the profession of the architect, is of great significance. A comparison with Alberti's treatment of the same subject proves informative. In the prologue to *De re aedificatoria* Alberti had described the exemplar

architect, identifying this figure as one who designs in a rational manner and realises works which fulfil the most important human needs. In chapters 10–11 of the ninth book, Alberti had specified the ideal education and professional qualities of the architect, insisting upon the need for a knowledge of painting and mathematics. Filarete does not advance such clear and precise propositions as these. Nonetheless, he exalts the role of the architect as being of primary importance, emphasising his activity as a builder as fundamental to human existence, and pointing out how difficult it is to master the profession. Furthermore, by demonstrating that every project is conceived and completed first in the mind of the architect, becoming a technical application only thereafter, Filarete plays a significant part in the process which culminates in the recognition of architecture as a liberal art.

A characteristic feature of Filarete's outlook is the relationship which develops in the treatise between the architect and the patron. Alberti had already addressed this issue, arguing that the person who, in the fullest intellectual sense, practises architecture had the right to retain control over their professional activity: this independence would include the architect's right to choose his own projects, with the option of simply acting as a consultant, or of offering no more than a design to the many potential patrons who sought the services of a successful architect (*De re aedificatoria*, Book IX ch. 11). For Filarete, the design process always goes hand-in-hand with the process of building. The intellectual theory cannot be divorced from the workshop practice. Furthermore, the architect, who has the task of creating and defining in his mind the project requested by the patron, assumes the role of 'mother' of the project, while the patron plays that of 'father'. This is a metaphor which grants the architect a much more dignified role than that afforded him in the Middle Ages. On the other hand, it defines his position not as an autonomous artist, but rather as a privileged figure within the confines of the court. Also related to the emerging status of the artistic profession is Filarete's mention of contemporary craftsmen such as architects, sculptors, painters and glassmakers: these act in the treatise as a *complement* to the group of ancient craftsmen whose effigies are depicted in the house of the architect. Onicoan (an anagram of Filarete's first name), and which in the treatise appear as a sort of gallery of famous men.

* * *

FILARETE

ON ARCHITECTURAL THEORY

The theory of architecture is not presented by Filarete following a defined organic structure but is instead proposed within his narrative, through both affirmations of a general nature as well as examples and descriptions of particular buildings. There is, therefore, a radical difference in method compared to Alberti. Alberti constructs a very coherent treatise, in which he first delineates the conceptual structure of the arguments, then the general characteristics of the pertinent themes, and finally the definition of the particular details. In this way, his propositions have a normative function. Filarete, on the other hand, when presenting anything other than a mere general definition, chooses to describe one or more particular examples from which his readers must deduce the theoretical criteria for themselves.

In the opening of the treatise, Filarete declares the principles on which his theory is founded. All architecture is modulated on the form and the proportions of Man. Man, too, is the inventor of the very act of building, because the first building was the hut. Regarding this particular theme, the author integrates Vitruvian theory into Christian history, affirming that the first builder was Adam. From the very beginning, then, it becomes evident how Filarete uses the ancient theoretician: Vitruvius is a supreme authority (*autoritas*), and his principal concepts are repeated; but Filarete does not go on to explain Vitruvius, an omission that often results in a text which distorts the Roman author's meaning. At this point it should be noted that, in order to compose a text which is a combination of information on materials, construction rules and mythical and historical anecdotes, Filarete uses not only the theoreticians cited with deference in his opening – Vitruvius and Alberti – but also a series of sources that range from the ancients – for example Pliny – and the Latin poets – to medieval literature – from Isidore of Seville to Dante.

As to the morphology of individual architectural elements, a point of significance is Filarete's stand against the use of the ogival arch (Book VIII, 230–32), comprising one section of many in his diatribe against the 'modern' style, that is, the Gothic. This passage dedicated to the pointed arch reflects the differences that had distinguished the Tuscan architect Filarete from the Lombard masters. Architectural morphology now takes on a meaning which Alberti had not even remotely intended: the problem is so important for Filarete that he not only notes, as had Alberti, that the ogival arch was not used in antiquity, but he also goes on to create an aesthetics of form. He observes that although the ogival arch and the round arch are both very strong supports, the round is better because the eye can follow its outline in a single, unbroken movement.

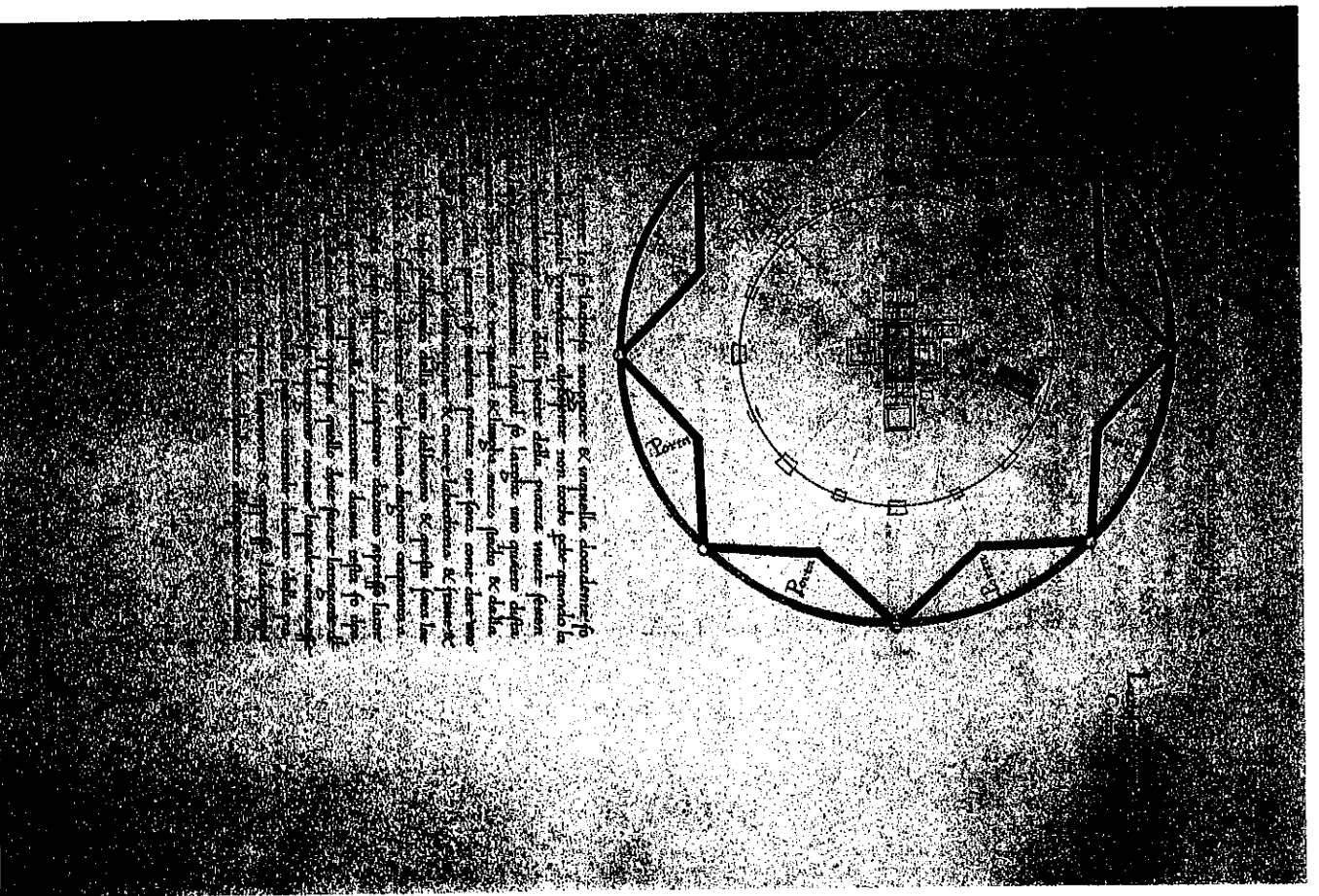
THE PLANNING OF SFORZINDA

The central argument of Filarete's treatise is the planning of a city. Sforzinda is the first ideal city of the Renaissance, and as such it is of great importance for the history of the idea of the city, even though Filarete's actual designs were not of any great influence (Kraut 1989, 13). Sforzinda has the form of an eight-point star, circumscribed in a circle (plate 2). The interconnecting piazzas and the seats of public offices, together with the royal palace, are all arranged in the centre. No detailed description is offered for either the quarters inside the walls or the relationship between the parts, but Filarete does describe both the general sub-division of the city and particular projects. The physiognomy of certain parts of the city thus remains nebulous, and the architectural theory must be deduced from what Filarete writes on single buildings.

As to the *specific* (species) of the buildings, whilst Alberti had classified all of the possible categories, distinguishing whether buildings were public or private, religious or secular, and whether they were built out of necessity or for beauty or indeed pleasure, Filarete proposes even more complex distinctions (Book II, 48ff), which are based on the function of the building and on criteria of an aesthetic and social nature. He first categorises the buildings in order of priority as public, private or sacred. He then distinguishes the sacred buildings as either communal, public or private, next analysing those of public function on the same terms, lastly subdividing the buildings of private citizens into categories for gentlemen, craftsmen or the poor.

After having affirmed along general lines these last criteria, which link the quality of the buildings to the social hierarchy, Filarete reconfirms this principle when he elaborates on private, domestic architecture, by proposing specific designs in Sforzinda for the ducal palace (Books VII, VIII and IX), the house of a gentleman (Books XI and XII), the house of a merchant and the house of a craftsman (Book XII). In this way he defines the categories of urban buildings, wherein their grandiosity and size correspond to the different divisions which make up the society. Concerning churches, Filarete goes on to indicate the general and the symbolic reasons for the cross plan, affirming that 'the reason why churches are made in the shape of a cross is because with the coming of Christ, the shape became used out of reverence for Him, in that He was put on a cross' (Book VII, 186). Filarete does not propose any one form as better than another. The different types of cross plans can be deduced from the individual examples which he

¹ Il perché le chiese si fanno in croce si è perché poi che venne Cristo s'è usato per riverenza sua, perché fu posto in croce.



2 Filarete's ideal city of Sforzinda, in the form of an eight-point star circumscribed in a circle, from the Codex Magliabechiano, fol. 43r. Florence, Biblioteca Nazionale.

proposes and which include both the longitudinal and the centralised plan. The latter is statistically the most frequent and, from the compositional point of view, the most original (Spencer 1958). Regarding the particular characteristics of the examples described, it can be said that Filarete generally proposes a Greek cross with a centralised plan and barrel-vaults covering the arms of the cross, while an octagonal dome rises over the central intersection. Tall bell-towers are placed at the corners of the building; a compositional feature derived from the antique monument of San Lorenzo in Milan. The recurring proposition of the centralised plan probably had an effect within the court of Francesco Sforza. The church of Santa Maria di Guadalupe in Bressanoro, begun in 1465 on a plan furnished by the court, is a centralised building with five, domed sectors. The differences between the church and Filarete's proposals are clear enough, but the church cannot be explained without the intermediary role of the treatise (Giordano 1988, 124-6).

In presenting buildings that are based on reminiscences or studies of ancient monuments, the author showed himself to be interested in the architectural heritage of antiquity, as well as being capable of understanding, in approximate terms, the historical function of the buildings: significant is his differentiation in the text between 'long' theatres and 'round' ones, which make allusion to the typologies of the amphitheatre and of the circus (Tomasi Velli 1990, 119-21). Projects of monumental scale, inspired by antique forms, are presented as exemplar architecture, and can be invested with symbolic meaning. The most famous example is that of the House of Virtue and of Vice (Book XVIII), where each of its parts has a symbolic function and meaning drawn from the didactic theme of Hercules at the Crossroads (Hidaka 1988). In other examples, Filarete did not reach such levels of complexity, choosing instead to concentrate on very elaborate projects such as the plan of the temple in the city of Plusiapolis.

ON DECORATION

Concerning the decoration which complements the architecture, once again Filarete does not openly specify a hierarchy of styles, but this can be deduced from the text. On mosaic he pays homage to the examples in St Mark's, Venice, and he proposes this type of decoration for the most prestigious buildings, such as the cathedral of Sforzinda (Book IX, 248ff.) and the church of the Ospedale (Book XI, 317-18). One can therefore conclude that Filarete thought highly of this technique which emphasises the preciousness of the materials and their luminosity. Indeed, the excellence of mosaic is re-emphasised throughout the

books on drawing: in Book XXIV Filarete even explains in detail the mosaic technique, but admits realistically that it is a 'lost art which has been little used since Giotto'¹ (Book XXIV, 671-2). This preference for mosaic goes hand-in-hand with the indications as to iconographic themes, which are of medieval derivation. Hell and purgatory, for example, are suggested as subject matter for the pavement of the cathedral of Sforzinda, complementing the theme of paradise in the upper section of the building (Book IX, 250). *Dipinti*, or frescoes, are recommended for the decoration of public buildings, for the gentleman's residence (Book XII, 327) and for the cloisters of the Gerolamite monastery (Book XVI, 467). For the public buildings, didactic allegories and exemplar figures from Roman history are specifically proposed as subject matter (Book X, 283ff). As noted earlier, the effigies of ancient craftsmen are also painted in the residence of the architect Ottomano (Book XIX, 563).

ON THE ORDERS OF ARCHITECTURE

Filarete's position regarding the architectural Orders – a term he does not use – is completely original. The process of codification of the Orders with reference to Vitruvius and to ancient monuments began in the fifteenth century; but it is a commonplace that Alberti is the only one of the fifteenth-century theorists to have correctly interpreted the Greek Orders as described by Vitruvius. Alberti equally drew conclusions from his own study of ancient monuments, from which he described a fourth Order (the 'Composite' or *Iatib*) besides those previously classified by Vitruvius. Alberti's definition, however, was evidently only advanced at a theoretical level, because in practice he, like all architects of the mid-fifteenth century, widely employed fictitious capital types which he discouraged in theory (Thoenes 1980). Filarete's position on the Orders is unique, even with respect to a panorama as diverse as that of fifteenth-century opinion on the subject. Furthermore, his classification has nothing in common with those of other theoreticians. In Book VII Filarete paraphrases a passage in which Vitruvius links the Orders to the dedication of temples (Book VII, 187), but in his following definition of the Orders (Book VIII), Filarete freely departs from the ancient source. Moreover, unlike Alberti, who had correctly identified all of the components of the column-and-beam system as constituent parts of the Order, Filarete defines a particular Order by making reference solely to the column, that is, solely to the vertical element of the system. There are three *maniere* (styles) of

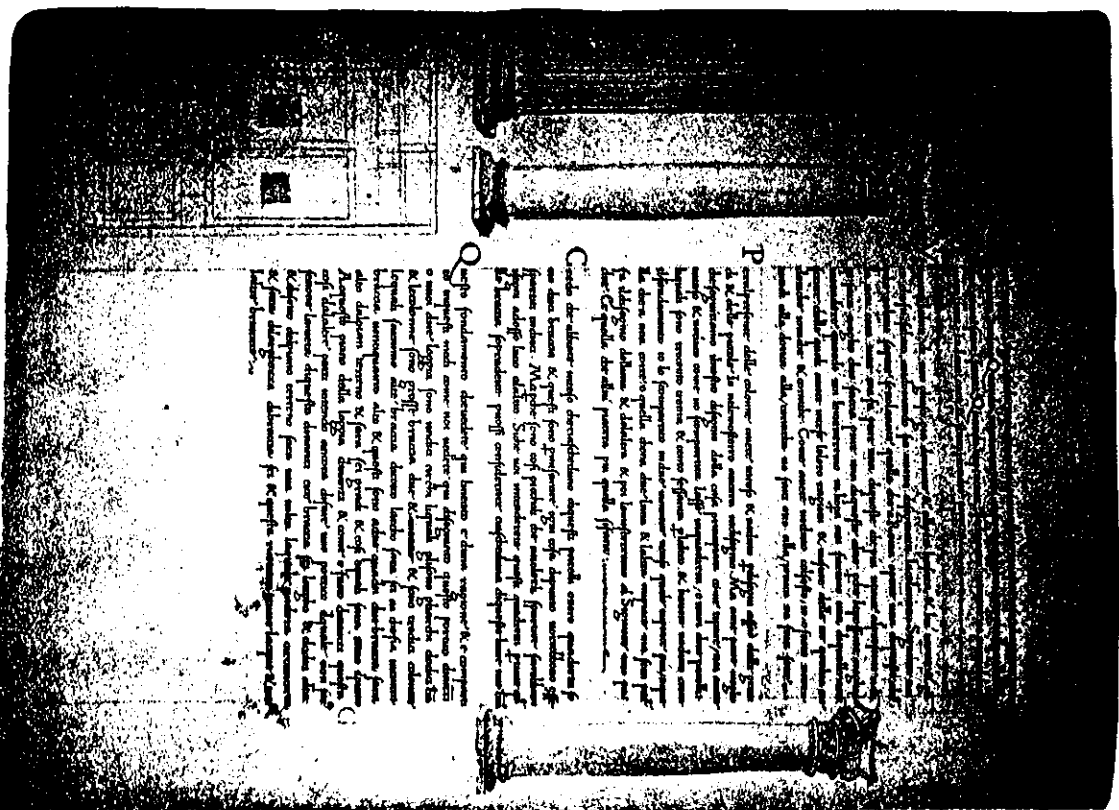
¹ 'Arte perduta, che da Giotto in qua poco s'usa'.

columns with distinct proportions: the Doric, formulated on the ratio of 1:9, which is the most slender and ornate; the Corinthian, on the ratio 1:8, which is the median Order; and the Ionic, on the ratio 1:7, the squattest and therefore the poorest. As to the morphology of the individual parts, the only fluted and cabled column is the Doric, a fact illustrated in the drawing which compares the three Orders (plate 3). Concerning the capitals, the Ionic is illustrated with its typical volutes, but in the text the proportions of the capital are specified using a unitary method which dictates, for all the Orders, the addition of a band of leaves that decorate the lower two-thirds of the capital (Book VIII, 216–17). Consequently, in the illustration both the Doric and the Corinthian Orders have capitals with S-shaped volutes which join above a band of acanthus leaves; and these capitals can thus only be differentiated by what becomes secondary decoration: the Ionic capital beneath its volutes is also uncharacteristically ringed with leaves.

Although the author's formulation of the *maniere* of the columns may seem bizarre even in the context of the series of fifteenth-century attempts to follow Vitruvius, Filarete elaborates a very organic and functional theory regarding the Orders. The proportions of the Orders respect those of the various human morphologies, and are made to correspond to social classes (Onians 1973; 1988a, 172–3). Thus the Doric, the most slender and ornate Order – and that also intended to dictate the proportions for doorways – is recommended for the house of a gentleman, the Corinthian Order for that of a merchant and the Ionic for that of a craftsman. The unique position of Filarete with respect to Vitruvius and Alberti is further accentuated by the fact that, once again regarding the Orders, the author declares explicitly that he would rather not consider the merits of Vitruvius's interpretation because the ancient text uses terms which 'are ugly and not in use'⁵ (Book VIII, 216). It has been pointed out that Filarete basically recommends a column of a Corinthian-like style as the privileged Order, and that he reserves for the Ionic column a humble role, thereby continuing the Florentine tradition of the first part of the fifteenth century initiated by Brunelleschi (Brunschli 1992, 23–5).

ON THE DESIGN PROCESS

The steps indicated by Filarete as essential to the passage from the idea to the definition of the project consist of a series of graphic designs and a final realisation of a wooden model. The first 'idea' of the building, after its development in the architect's mind, is expressed in a rough



3 Filarete's comparative drawing of the three Orders, Doric, Corinthian and Ionic, from the Codex Magliabechiano, fol. 57r. Florence, Biblioteca Nazionale.

sketch, otherwise known as *congeito* or *disegno di grosso*; this is followed by a scale drawing and a wooden model, that is, a *modello* or *disegno filarete*, which serves to illustrate fully the architect's project to the patron and builders. The method used to define the building's plan consists of first transferring on to an axis the measurements – to scale

⁵ 'sono scabrosi e non si usano'.

— of the sides of the area to be built upon. Next, the surface is divided into squares: every square has sides equal to a certain number of *braccia*, which varies from project to project. It is upon this grid — which serves as a base, and which is designed to reflect the scale of the concept that the architect wishes to realise and its relationship to the available space — that Filarete distributes the various parts of the building. Drawing, then, is the method which allows the project to be given form. From the technical point of view this method of elaboration is similar to modern systems which involve the division of square units and the combination of whole-number values based on a unit of measurement — which in Filarete's case is the *braccia*.

ON SFORZINDA AND THE IDEAL CITY OF MILAN

It was noted earlier that the outstanding feature of Filarete's treatise is its concentration on the planning of Sforzinda, the first modern, utopian city. Filarete's project for the distribution of the central piazzas has certain characteristics which significantly distinguish it from the Vitruvian forum and from Albertian theory. Alberti had clearly differentiated between the characteristics of an ancient city and the needs of a modern one. To describe the former, he had paraphrased Vitruvius, and to characterise the form of the latter, he had proposed a rectangular piazza with sides of a ratio 1:2, surrounded by buildings with porticoes which were in proportion to the grandeur of the piazza. Filarete does not show any interest in a reconstruction of the ancient forum, basilica or other public place such as the *curia*. For the centre of the city he proposes an arrangement of three interconnecting piazzas, each proportioned to the ratio of 1:2 (Book VI, 165–6). The main piazza is sited in the centre of the composition: the cathedral is located on its east side, the ducal palace on its west side. The northern side of the main piazza opens up on to a smaller one, that of the merchants. In this piazza, the seats of the civil administration can be found: the palace of the *podestà*, the town hall, the prisons and the treasury. The southern side of the main piazza opens on to a further small piazza (although bigger than that of the merchants), which is a market place and is enclosed by the palazzo of the *capitano*, the taverns, the brothel and the public baths.

At the beginning of Book X, Filarete contradicts in part his previous statements, since he gives slightly different measurements for the main piazza and, more importantly, he states his intention to locate the town hall (that is, the *Palazzo della Ragione del Comune*) in the centre of the merchants' piazza rather than on its edge. This public building is to be built upon a series of pillars linked by arches, these running along both

the perimeter and the longitudinal centre-line of the ground floor, so as to create an open space comparable to a great hall.

Filarete emphasises the fact that the three-piazza arrangement is linked by streets directly to the city gates. Along these streets are still more piazzas, all proportioned using the ratio 1:2, and each designed to host markets of various types and surrounded by shops. The streets which lead from the main piazza to the towers on the walls of the city are, on the other hand, lined by monasteries, whilst parochial churches face the piazzas of these streets. It is evident from the particular functions of each building, and from the systematic naming of these buildings, that the centre of Filarete's Sforzinda fulfils the needs of the society of the time, in which the city is dominated by the duke and is governed by public administrators of medieval tradition (which Filarete signifies by the names still in use). Filarete's city is, then, in its distribution of the seats of religious and civil power and of the market-places, a rationalisation of the late-medieval city; and especially a rationalisation of the form that the urban centre had acquired in the region of the Po, where the arrangement of three interconnecting piazzas linked to the cathedral and the public buildings was the norm (as, for example, in Pavia and Lodi).

Hence, although utopian, Filarete's city reflected the arrangement of certain actual cities. Indeed, Filarete's project bears many significant similarities to, and was perhaps influenced by, the real city of Milan and its idealisation in medieval cartography. To confirm this hypothesis it is necessary to recall some historical facts particular to this Lombard city. In 1228 the *comune* had founded, next to the piazza of the cathedral, a new piazza, in the centre of which was located the *botello*, or *Palazzo della Ragione*, whose ground floor was entirely composed of pillars and so open to the surrounding piazza. This urban project, of great political significance because it affirmed the full sovereignty of the *comune*, had not been limited to the piazza alone but had also addressed the streets which linked the new public space to each of the city gates. The radial structure of Milan, which in the early Middle Ages had prevailed over the Roman grid system, following this exceptional intervention also took on a symbolic meaning. Indeed a fourteenth-century map of Milan accompanying a text of Galvano Fiamma, the most important historian of the period, illustrates the city as completely circular and self-contained within the urban walls. Furthermore, it shows the civic piazza in the centre, adjacent to the cathedral and the ducal palace. Filarete must have meditated upon the history and on the *fama* *urbis* of Milan, furnishing an idealised re-elaboration of this idea contained within his homage paid to the duke. In this way the treatise reconfirms its dual nature as theoretical work and courtly tribute.